

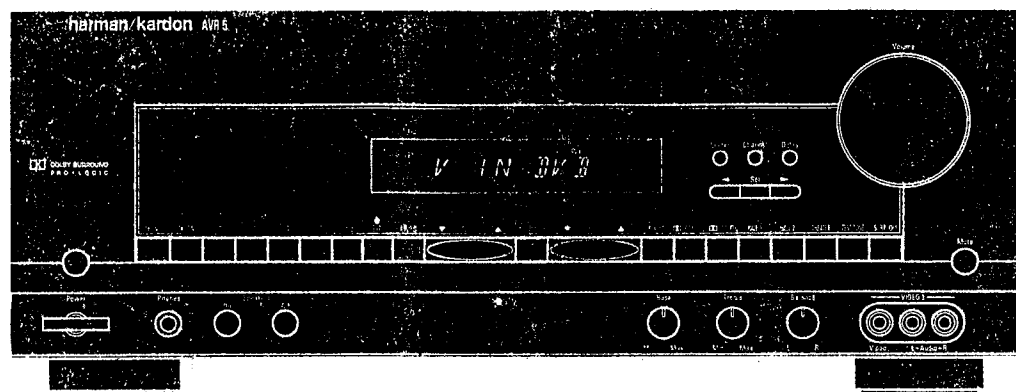
# The Harman Kardon

Model AVR5/ AVR18RDS

Manual A

## AUDIO AND VIDEO RECEIVER

# Technical Manual



## CONTENTS

|  |    |                                      |    |
|--|----|--------------------------------------|----|
| SPECIFICATIONS.....                          | 2  | DISASSEMBLY PROCEDURES.....          | 22 |
| ELECTROSTATICALLY SENSITIVE (ES) DEVICE..... | 3  | EXPLODED VIEW.....                   | 25 |
| LEAKAGE TEST.....                            | 4  | PRINCIPAL SCREW LOCATIONS.....       | 27 |
| ALIGNMENT PROCEDURES.....                    | 5  | ELECTRICAL PARTS LIST.....           | 30 |
| TEST EQUIPMENT REQUIRED.....                 | 5  | IC BLOCK DIAGRAMS.....               | 56 |
| ALIGNMENT AND TEST POINTS.....               | 5  | P.C. BOARDS.....                     | 66 |
| CONTROLS AND FUNCTIONS.....                  | 8  | SCHEMATIC DIAGRAMS.....              | 70 |
| CIRCUIT DESCRIPTION.....                     | 11 | WIRING DIAGRAM.....                  | 77 |
| BLOCK DIAGRAM.....                           | 21 | PACKING MATERIAL AND PARTS LIST..... | 78 |

**harman/ kardon**

Parts and Service Office

250 Crossways Park Dr, Woodbury, N.Y. 11797

1112 AVR5/AVR18RDS 1200 Printed in Japan

## SPECIFICATIONS

### FRONT AMP SECTION

|   | Nominal         | Limit               |
|---|-----------------|---------------------|
| Continuous Power Output<br>(STEREO MODE), Input: CD   | ≥ 50W           | ≥ 45W               |
| THD: 0.08%, 8ohms                                     |                 |                     |
| Both Channel Driven (20Hz - 20KHz)<br>(SURROUND MODE) | ≥ 40W           | ≥ 35W               |
| THD: 0.3%, 8ohms, 1KHz                                |                 |                     |
| THD at 50W, 8ohms, Input: CD                          |                 |                     |
| 20Hz  | ≤ 0.05%         | ≤ 0.08%             |
| 1KHz  | ≤ 0.05%         | ≤ 0.08%             |
| 20KHz   | ≤ 0.05%         | ≤ 0.08%             |
| IM Distortion at 50W, 8ohms, Vol: Max                 |                 |                     |
|   | ≤ 0.05%         | ≤ 0.08%             |
| Input Sensitivity for Rated Power Output (50W)        |                 |                     |
| Tape Monitor/ CD/ DVD                                 | 200mV           | 150-250mV           |
| Video 1/ Video 2/ Video 3/ 6-CH In                    | 200mV           | 150-250mV           |
| S/N Ratio Input Shorted at 1KHz 1W Output (WTD IHF-A) |                 |                     |
| CD  | ≥ 95dB          | ≥ 90dB              |
| Tone Control  |                 |                     |
| Bass: 100Hz   | +10dB<br>- 10dB | +10±2dB<br>- 10±2dB |
| Treble: 10Hz  | +10dB<br>- 10dB | +10±2dB<br>- 10±2dB |
| Frequency Response at -3dB                            |                 |                     |
| Mode: Stereo, Ref: 1KHz, 10Hz-120KHz 15Hz-100KHz      |                 |                     |
| Channel Crosstalk Input Shorted by 1Kohms             |                 |                     |
| 100Hz   | ≥ 60dB          | ≥ 52dB              |
| 1KHz  | ≥ 60dB          | ≥ 52dB              |
| 10KHz   | ≥ 50dB          | ≥ 42dB              |

### CENTER AMP SECTION

|                                | Nominal    | Limit      |
|--------------------------------|------------|------------|
| RMS Output Power               |            |            |
| THD (0.05%, 8ohms, 1KHz)       | ≥ 40W      | ≥ 35W      |
| Only Center Channel Driven     |            |            |
| S/N Ratio (Input Level: 350mV) | ≥ 70dB     | ≥ 65dB     |
| Input shorted, IHF-A WTD       |            |            |
| Frequency Response at -3dB     |            |            |
| 8ohms, Dolby Pro-Logic         | 40Hz-30KHz | 60Hz-20KHz |

### REAR AMP SECTION

|                                      | Nominal   | Limit      |
|--------------------------------------|-----------|------------|
| RMS Output Power                     |           |            |
| THD (0.7%, 8ohms, 1KHz)              | ≥ 40W     | ≥ 35W      |
| Only Rear Channel Driven             |           |            |
| S/N Ratio (Input shorted, IHF-A WTD) | ≥ 63dB    | ≥ 55dB     |
| Delay: 20ms, Input Level: 350mV      |           |            |
| Frequency Response at -3dB           |           |            |
| 8ohms, Dolby Pro-Logic               | 80Hz-7KHz | 100Hz-6KHz |

### VIDEO AMP SECTION

|  | Nominal    | Limit   |
|--|------------|---------|
| Input Sensitivity/Impedance<br>(DVD, VIDEO1, VIDEO2, VIDEO3) | 1Vp-p/75 Ω | ± 1dB   |
| Output Level/Impedance<br>VIDEO1, Monitor                    | 1Vp-p/75 Ω | ± 1dB   |
| Frequency Response at -3dB                                   | DC-8MHz    | DC-6MHz |

### FM SECTION

|  | Nominal         | Limit        |
|--|-----------------|--------------|
| Tuning Cover Range                                   |                 |              |
| USA/ Canada: 100KHz STEP                             | 87.50-108.00MHz |              |
| Europe : 50KHz STEP                                  | 87.50-108.00MHz |              |
| Mono Usable Sensitivity(75ohms Input, 98MHz)         | ≤ 12.2dbf       | ≤ 17.3dbf    |
| Image Rejection (at 98MHz)                           |                 |              |
| USA/Canada   | ≥ 40dB          | ≥ 35dB       |
| Europe   | ≥ 70dB          | ≥ 65dB       |
| IF Rejection (at 98MHz)                              | ≥ 80dB          | ≥ 70dB       |
| 50dB Quieting Sensitivity (at 98MHz, 100% MOD.)      |                 |              |
| IHF Band Pass Filter                                 |                 |              |
| Stereo   | ≤ 41.2dbf       | ≤ 47.3dbf    |
| Distortion (1KHz, 100% MOD. at 98MHz, 65dbf Input)   |                 |              |
| IHF Band Pass Filter                                 |                 |              |
| Mono   | ≤ 0.3%          | ≤ 0.5%       |
| S/N Ratio (500 Input, 100% MOD. at 98MHz)            |                 |              |
| IHF Band Pass Filter                                 |                 |              |
| Stereo   | ≥ 65dB          | ≥ 60dB       |
| Frequency Response(-3dB)                             |                 |              |
| USA/Canada De-Emphasis: 75μs                         | 20Hz-15KHz      | 40Hz-14KHz   |
| Europe De-Emphasis: 50μs                             | 20Hz-15KHz      | 40Hz-14KHz   |
| AM suppression at 98MHz                              |                 |              |
|  | ≥ 52dB          | ≥ 47dB       |
| Muting threshold (at 98MHz)                          | 35.2dbf         | 31.2-39.2dbf |
| Overload Distortion at 98MHz                         | 0.3%            | 1%           |
| Capture Ratio at 65dbf                               | ≤ 1.5dB         | ≤ 2.5dB      |
| Stereo Separation (at 98MHz, 100% MOD., 500μV Input) |                 |              |
| IHF Band Pass Filter                                 | ≥ 40dB          | ≥ 30dB       |
| 1KHz   |                 |              |
| Tape out Level (at 98MHz)                            | 500mV           | 350-650mV    |

### AM SECTION

|  | Nominal     | Limit      |
|--|-------------|------------|
| Tuning Cover Range (MW)                            |             |            |
| USA/ Canada: 10KHz STEP                            | 520-1710MHz |            |
| Other : 9KHz STEP                                  | 522-1611MHz |            |
| Usable Sensitivity                                 |             |            |
| 999/990KHz   | ≤ 500μV/m   | ≤ 1000μV/m |
| Image Rejection (at 999KHz)                        | ≥ 35dB      | ≥ 30dB     |
| AGC Figure of Merit (From 100mV/m at 999/1000KHz)  |             |            |
|  | ≥ 55dB      | ≥ 53dB     |
| Distortion (999/1000Hz, 30% MOD. 50mV/m Input)     |             |            |
|  | ≤ 1.0%      | ≤ 1.5%     |
| Frequency Response (999/1000KHz) at -6dB           |             |            |
|  | 80Hz-2.3KHz | 100Hz-2KHz |
| Selectivity (at 999/1000Hz)                        |             |            |
| 9KHz/ 10KHz  | ≥ 25dB      | ≥ 23dB     |
| S/N Ratio (999/1000KHz, With Antenna Input 50mV/m) | ≥ 40dB      | ≥ 35dB     |
| Overload Distortion at 999/1000KHz                 |             |            |
|  | ≥ 1%        | ≥ 1.5%     |
| TAPE Output Level at 999/1000KH (5mV/m Input)      |             |            |

### GENERAL

|                                   | Nominal        | Limit    |
|-----------------------------------|----------------|----------|
| Power Consumption                 |                |          |
| At Rated Power All Channel Driven |                |          |
| USA/Canada                        | 195W (1/8Pmax) | 160-200W |
| Europe                            | 550W           | 500-600W |
| Idling at Minimum Volume Control  |                |          |
| USA/Canada                        | 70W            | 50-90W   |
| Europe                            | 70W            | 50-90W   |
| Power Supplies:                   |                |          |
| USA/Canada                        | AC120V, 60Hz   |          |
| Europe                            | AC230V, 50Hz   |          |
| Dimensions (W×H×D)                |                |          |
| inches                            | 17.3×5.5×15    |          |
| mm                                | 440×140×380    |          |
| Weight(lbs/ kgs)                  | 28.8/ 13.1     |          |

## ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.



1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical change sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

## PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing.

Components identified with the IEC symbol  in the parts list are of special significance to safety. When replacing a component identified with , use only the replacement parts designated, or parts with the same ratings or resistance, wattage, or voltage that are designated in the parts list in this manual.

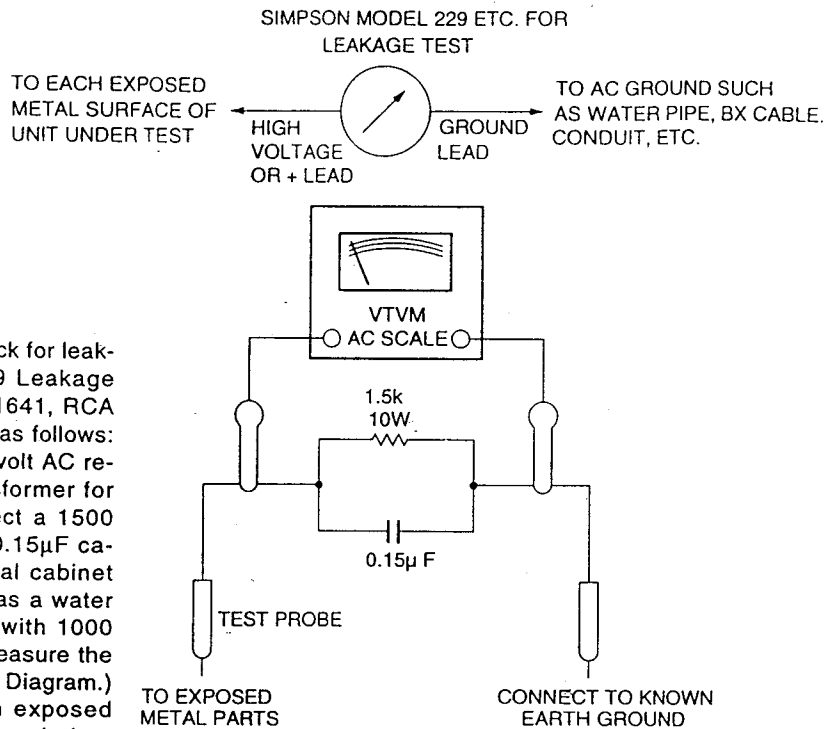
Leakage - current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

## LEAKAGE TEST (FOR SERVICE ENGINEERS IN THE U.S.A.)

Before returning the unit to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the unit.
2. Be sure that any protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc. Which were removed for servicing are properly reinstalled.
3. Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows: Plug the power cord directly into a 120-volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connect a 1500 Ohm, 10-watt resistor paralleled by a 0.15 $\mu$ F capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 Ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (See Diagram.) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal, cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the On and Off positions.)

A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.





## ALIGNMENT PROCEDURES

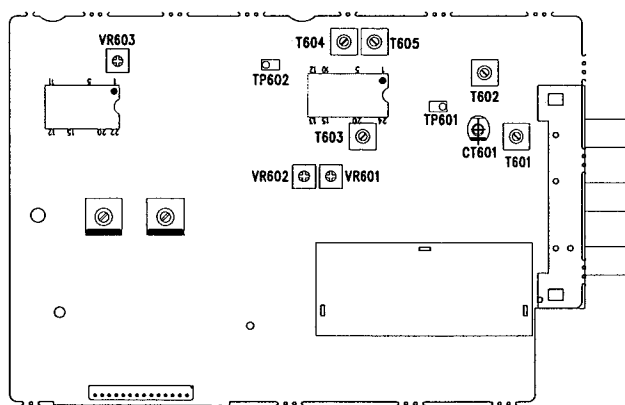
AVR5/AVR18RDS

### 1. Test Equipment Required

- AM Standard Signal Generator (AM SSG)
- Oscilloscope
- AC Voltmeter
- FM Standard Signal Generator (FM SSG)
- Stereo Modulator
- Audio Generator
- Distortion Meter
- DC Voltmeter
- Frequency Counter

**Note:** Disconnect external FM antenna prior to alignment

### 2. Alignment and Test Points

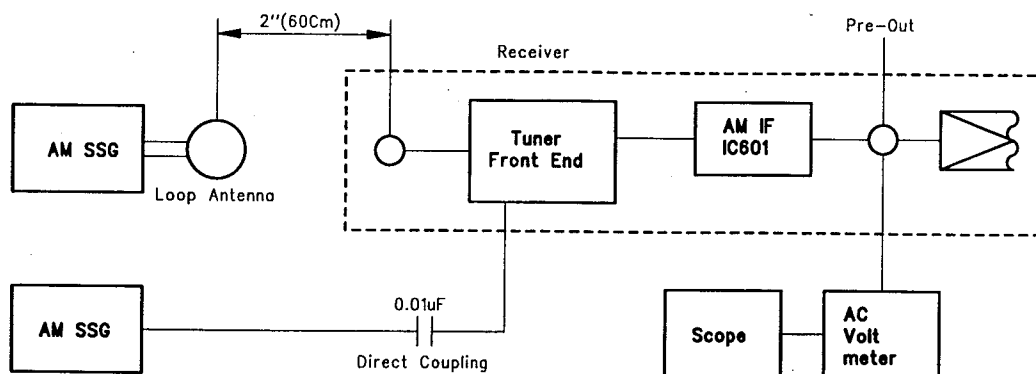


### 3. AM IF and RF Alignment

Preparation

1. Output of signal Generator should not be higher than necessary to obtain an optimum output reading.
2. Signal Generator Modulation: 30%
3. Switch: Press to AM.

| Step | Signal Generator Frequency | Receiver Frequency on the Display | Equipment Connection             | Adjustment Point | Adjust for  |
|------|----------------------------|-----------------------------------|----------------------------------|------------------|---|
| 1    | 990KHz<br>(400Hz, Mod.)    | 520KHz                            | DC Voltmeter<br>TP601            | T602             | 1.2V reading<br>Maximum   |
| 2    | 600KHz<br>(400Hz, Mod.)    | 600KHz                            | AC Voltmeter to<br>TAPE OUT jack | T601             | reading<br>Maximum  |
| 3    | 1400KHz<br>(400Hz, Mod.)   | 400KHz                            | AC Voltmeter to<br>TAPE OUT jack | CT601            | reading<br>Maximum  |
| 4    | 990KHz<br>(400Hz, Mod.)    | 990KHz                            | AC Voltmeter to<br>TAPE OUT jack | T603             | reading<br>FL display "TUNED"   |
| 5    | 990KHz<br>(400Hz, Mod.)    | 990KHz                            | Same as<br>Step 1.               | VR601            | Indicator on receiver<br>with AM SSG Output<br>level of 800 $\mu$ V/m |



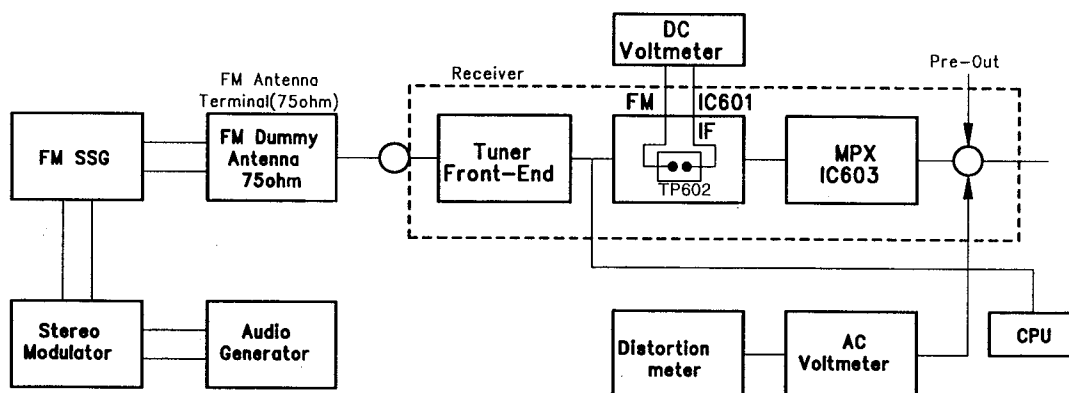
**AM Alignment Connection**

#### 4. FM IF Alignment

##### Preparation

1. Signal Generator output should be no higher than necessary to obtain an optimum output reading.
2. Switch Press to FM.
3. Signal generator deviation: 75KHz (AVR5) 40KHz (AVR18RDS)

| Step | Signal Generator Frequency | Receiver Frequency on the Display | Equipment Connection              | Adjustment Point | Adjust for   |
|------|----------------------------|-----------------------------------|-----------------------------------|------------------|--|
| 1    | 98.0MHz<br>(1KHz, Mod.)    | 98.0MHz                           | DC Voltmeter to TP 602            | T604             | Zero reading on DC voltmeter   |
| 2    | 98.0MHz<br>(1KHz, Mod.)    | 98.0MHz                           | Distortion meter to TAPE OUT jack | T605             | Minimum distortion   |
| 3    | 98.0MHz<br>(1KHz, Mod.)    | 98.0MHz                           | Same as Step 1                    | VR602            | FL display "TUNED" Indication on receiver with FM SSG output level of 35.2 dbf |



**FM RF/IF and MPX Alignment Connection**

## 5. MPX Alignment, SM Alignment

**AVR5/AVR18RDS**

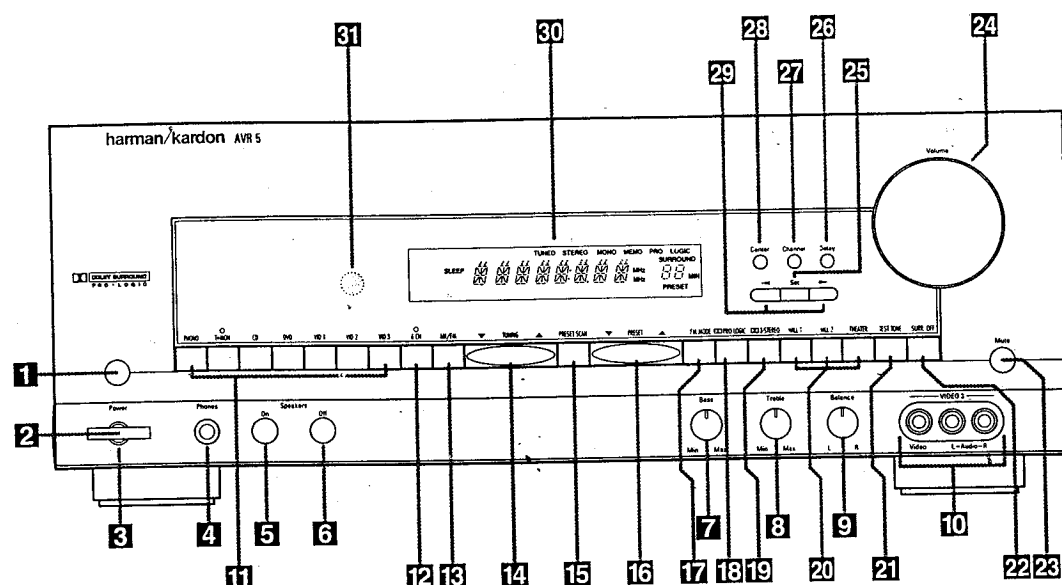
### Preparation

1. Switch : Press to FM.
2. Tuner for 98MHz on band.
3. Signal Generator output level : 1000  $\mu$ V.
4. Deviation : 75KHz (AVR5) , 40KHz (AVR18RDS) at 100% modulation of composite signal.
5. Connect Signal Generator to FM antenna terminal through FM dummy antenna (75  $\Omega$ ).

| Step   | 19KHz<br>Modulation<br>Level | Signal Generator<br>Frequency<br>Setting | Equipment<br>Connection                       | Adjustment<br>Point | Adjust<br>for  |
|--|------------------------------|--|---|---------------------|--|
| 1  | 7.5KHz Mod.                  | Composite to<br>channel 1KHz R           | AC voltmeter to TAPE<br>OUT jack of R channel | -                   | Adjust for about 450mV of<br>audio output              |
| 2  | 7.5KHz Mod.                  | Composite to<br>channel 1KHz L           | AC voltmeter to TAPE<br>OUT jack of R channel | VR603               | AC voltmeter reading should<br>be at least 40dB below. |
| 3  | 7.5KHz Mod.                  | Composite to<br>channel 1KHz R           | AC voltmeter to TAPE<br>OUT jack of L channel | VR603               | Same as Step 2.  |
| If you could not obtain -40dB reading in Steps 2 and 3 (compared with Step 1), read just VR603 until you obtain -40dB readings for both steps 2 and 3. Nominal is -45dB. |                              |  |   |                     |  |

## CONTROLS AND FUNCTIONS

## Front Panel Controls



**1 Main Power Switch:** Press this button to apply power to the AVR5/AVR18RDS.

When the switch is pressed in the unit is placed in a Standby mode, as indicated by the amber LED **3** surrounding the **System Power Control** **2**. This button MUST be pressed in to operate the unit. To turn the unit off and prevent the use of the remote control, this switch should be pressed until it pops out from the front panel so that the word "OFF" may be read at the top of the switch.

NOTE: In normal operation this switch is left in the "ON" position.

**2 System Power Control:** When the **Main Power Switch** **1** is "ON," press this button to turn on the AVR5/AVR18RDS; press it again to turn the unit off. Note that the **Power Indicator** surrounding the switch **3** will turn green when the unit is on.

**3 Power Indicator:** This LED will illuminate in amber when the unit is in the Standby mode to signal that the unit is ready to be turned on. When the unit is in operation, the indicator will turn green. A red indicator means that the unit is in the Protect mode, and should be turned off and then checked for a possible speaker wire short circuit.

**4 Headphone Jack:** This jack may be used to listen to the AVR5/AVR18RDS's output through a pair of headphones. Be Certain that the headphones have a standard 1/4" stereo phone plug.

**7 Bass Control:** Turn this control to modify the low-frequency output of the left/right channels by as much as  $\pm 10$ dB. Set this control to a suitable position for your taste and room acoustics.

**5 Speakers ON Button:** This button turns the speakers on for normal listening.

**6 Speakers OFF Button:** This button turns the speakers off for private listening when the headphones are in use.

**8 Treble Control:** Turn this control to modify the high-frequency output of the left/right channels by as much as  $\pm 10$ dB. Set this control to a suitable position for your taste and room acoustics.

**9 Balance Control:** Turn this control to change the relative volume for the front left/right channels.

NOTE: For proper operation of the surround modes this control should be at the midpoint, or "12 o'clock" position.

**10 Video 3 Inputs:** These audio/video inputs may be used for temporary connection of video games, camcorders, digital still cameras or portable audio products. To select a source connected to these jacks, press the **Vid 3 Input Selector** **11**.

**11 Input Selectors:** Press one of these buttons to select or change the input source. If the unit is in the Standby mode, pressing one of these buttons will also turn the AVR5/AVR18RDS on.

**12 6-Channel Direct Selector:** Press this button to select the output of an optional, external 6-channel decoder connected to the **6 Ch Direct** inputs **10** as the listening source.

**13 AM/FM:** Press this button to select the tuner as the AVR5/AVR18RDS's input source. When it is first pressed the last station tuned will be heard. Press it again to change between AM and FM bands.

**14 Tuning Button:** Press the left side of the button to tune lower frequency stations and the right side of the button to tune higher frequency stations. When a station with a strong signal is tuned, the **TUNED** indicator will illuminate in the **Information Display** **30**. A brief (1/2 second) press of the button will manually tune to the next frequency increment, while pressing and holding the button for a longer period will automatically tune to the next station with a signal strong enough for acceptable reception.

**15 Preset Scan:** Press this button to automatically scan through the stations that have been programmed in the AVR5/AVR18RDS's memory. The tuner will play five seconds of each station before moving to the next preset station. To stop the scan when the desired station is heard, press the button again.

**16 Preset Stations Selector:** Press this button to select stations that have been entered into the preset memory.

**17 FM Mode:** Press this button to select the stereo or mono mode for FM tuning. In the STEREO mode a **Stereo** indicator will illuminate in the **Information Display** **30**, and stereo reception will be provided when stations are transmitting stereo signals. In the MONO mode the left and right signals from stereo broadcasts will be mixed together and reproduced through all channels. Select MONO for better reception of weak signals.

**18 Dolby Pro Logic Selector:** Press this button to select the Dolby Pro Logic surround mode when listening to an analog program that is encoded with surround-sound information.

**19 Dolby 3 Stereo Selector:** Press this button to select the Dolby 3 Stereo listening mode. This mode is used primarily when a program has surround information when a center channel speaker, but no surround speakers, is installed.

**20 Analog Surround Mode Selectors:** Press one of these buttons to select the analog surround modes. These modes may be used with any analog program source to create a pleasing surround effect.

**21 Test Tone:** Press this button to begin the sequence of steps used to set the AVR5/AVR18RDS output levels. When this button is pressed, a test tone will replace the currently selected listening source and the **Information Display** **30** will show the channel where the

test tone appears. The test tone will automatically switch to the next channel after three seconds.

**22 Surround Off:** Press this button to turn off all surround processing, and to listen to a program in traditional stereo from the left front and right front speakers only.

**23 Mute:** Press this button to momentarily silence the speaker output of the AVR5/AVR18RDS.

**24 Volume Control:** Turn the knob clockwise to increase volume, counterclockwise to decrease the volume.

**25 Set Button:** This button has two functions. If this button is pressed while in normal operation, the **Information Display** **30** will show the Surround mode for three seconds. This button is also used to enter an output level setting when using the **Test Tone** and **Selector Buttons** **21** **29**.

**26 Delay:** Press this button to enter delay time settings.

**27 Channel Select:** Press this button during normal operation, or during the Test Tone operation, to begin the process that adjusts the output levels.

NOTE: Be sure to select the Dolby Pro Logic surround mode before calibration so that all five channels will be adjusted.

**28 Center Speaker Select Button:** Press this button to select the center channel speaker. When it is first pressed, the **Information Display** **30** will show the currently selected speaker type. Press it again to show another speaker type or no speaker option (this option is available with the Dolby Pro Logic surround mode only).

Release this button when a desired selection is shown in the **Information Display** **30**.

**29 Selector Buttons:** Press these buttons to adjust the AVR5/AVR18RDS output levels. You may use these buttons while you are checking the output levels by pressing either the **Test Tone Button** **21** or the **Channel Select Button** **27**.

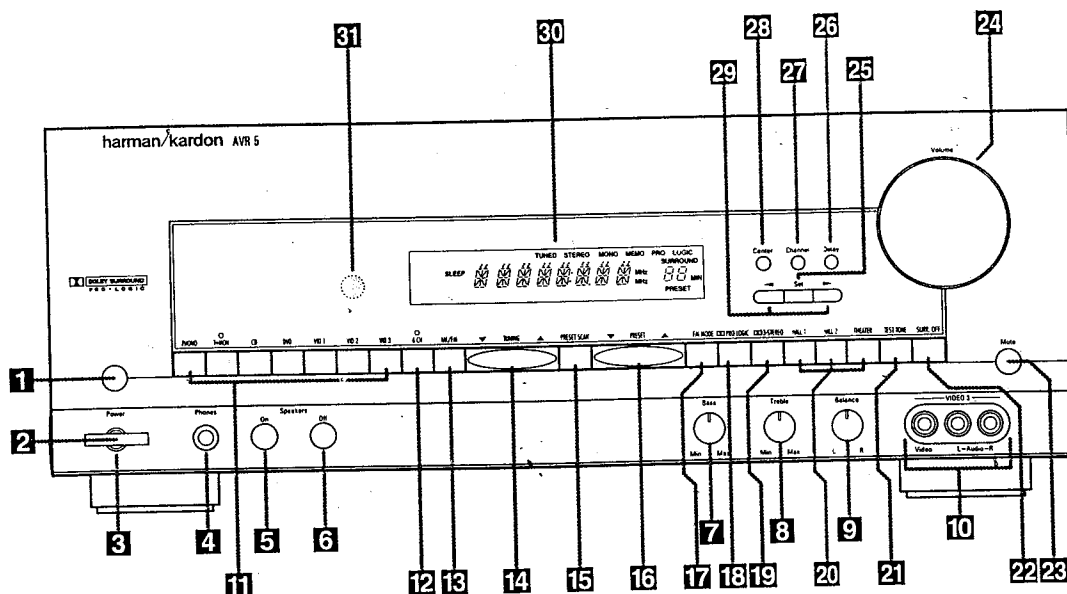
NOTE: Be sure to press the **Set Button** **25** to enter a new output level each time you adjust the channel.

**30 Information Display:** This display delivers messages and status indications to help you operate the receiver.

**31 Remote Sensor Window:** The sensor behind this window receives infrared signals from the remote control. Aim the remote at this area and do not block or cover it unless an external remote sensor is installed.

# CONTROLS AND FUNCTIONS

## Front Panel Controls



**1 Main Power Switch:** Press this button to apply power to the AVR5/AVR18RDS. When the switch is pressed in the unit is placed in a Standby mode, as indicated by the amber LED **3** surrounding the **System Power Control** **2**. This button MUST be pressed in to operate the unit. To turn the unit off and prevent the use of the remote control, this switch should be pressed until it pops out from the front panel so that the word "OFF" may be read at the top of the switch.

NOTE: In normal operation this switch is left in the "ON" position.

**2 System Power Control:** When the **Main Power Switch** **1** is "ON," press this button to turn on the AVR5/AVR18RDS; press it again to turn the unit off. Note that the **Power Indicator** surrounding the switch **3** will turn green when the unit is on.

**3 Power Indicator:** This LED will illuminate in amber when the unit is in the Standby mode to signal that the unit is ready to be turned on. When the unit is in operation, the indicator will turn green. A red indicator means that the unit is in the Protect mode, and should be turned off and then checked for a possible speaker wire short circuit.

**4 Headphone Jack:** This jack may be used to listen to the AVR5/AVR18RDS's output through a pair of headphones. Be Certain that the headphones have a standard 1/4" stereo phone plug.

**7 Bass Control:** Turn this control to modify the low-frequency output of the left/right channels by as much as  $\pm 10\text{dB}$ . Set this control to a suitable position for your taste and room acoustics.

**5 Speakers ON Button:** This button turns the speakers on for normal listening.

**6 Speakers OFF Button:** This button turns the speakers off for private listening when the headphones are in use.

**8 Treble Control:** Turn this control to modify the high-frequency output of the left/right channels by as much as  $\pm 10\text{dB}$ . Set this control to a suitable position for your taste and room acoustics.

**9 Balance Control:** Turn this control to change the relative volume for the front left/right channels.

NOTE: For proper operation of the surround modes this control should be at the midpoint, or "12 o'clock" position.

**10 Video 3 Inputs:** These audio/video inputs may be used for temporary connection of video games, camcorders, digital still cameras or portable audio products. To select a source connected to these jacks, press the **Vid 3 Input Selector** **11**.

**11 Input Selectors:** Press one of these buttons to select or change the input source. If the unit is in the Standby mode, pressing one of these buttons will also turn the AVR5/AVR18RDS on.

**12 6-Channel Direct Selector:** Press this button to select the output of an optional, external 6-channel decoder connected to the **6 Ch Direct** inputs **13** as the listening source.

**13 AM/FM:** Press this button to select the tuner as the AVR5/AVR18RDS's input source. When it is first pressed the last station tuned will be heard. Press it again to change between AM and FM bands.

**14 Tuning Button:** Press the left side of the button to tune lower frequency stations and the right side of the button to tune higher frequency stations. When a station with a strong signal is tuned, the **TUNED** indicator will illuminate in the **Information Display** **30**. A brief (1/2 second) press of the button will manually tune to the next frequency increment, while pressing and holding the button for a longer period will automatically tune to the next station with a signal strong enough for acceptable reception.

**15 Preset Scan:** Press this button to automatically scan through the stations that have been programmed in the AVR5/AVR18RDS's memory. The tuner will play five seconds of each station before moving to the next preset station. To stop the scan when the desired station is heard, press the button again.

**16 Preset Stations Selector:** Press this button to select stations that have been entered into the preset memory.

**17 FM Mode:** Press this button to select the stereo or mono mode for FM tuning. In the STEREO mode a **Stereo** indicator will illuminate in the **Information Display** 30, and stereo reception will be provided when stations are transmitting stereo signals. In the MONO mode the left and right signals from stereo broadcasts will be mixed together and reproduced through all channels. Select MONO for better reception of weak signals.

**18 Dolby Pro Logic Selector:** Press this button to select the Dolby Pro Logic surround mode when listening to an analog program that is encoded with surround-sound information.

**19 Dolby 3 Stereo Selector:** Press this button to select the Dolby 3 Stereo listening mode. This mode is used primarily when a program has surround information when a center channel speaker, but no surround speakers, is installed.

**20 Analog Surround Mode Selectors:** Press one of these buttons to select the analog surround modes. These modes may be used with any analog program source to create a pleasing surround effect.

**21 Test Tone:** Press this button to begin the sequence of steps used to set the AVR5/AVR18RDS output levels. When this button is pressed, a test tone will replace the currently selected listening source and the **Information Display** 30 will show the channel where the

test tone appears. The test tone will automatically switch to the next channel after three seconds.

**22 Surround Off:** Press this button to turn off all surround processing, and to listen to a program in traditional stereo from the left front and right front speakers only.

**23 Mute:** Press this button to momentarily silence the speaker output of the AVR5/AVR18RDS.

**24 Volume Control:** Turn the knob clockwise to increase volume, counterclockwise to decrease the volume.

**25 Set Button:** This button has two functions. If this button is pressed while in normal operation, the **Information Display** 30 will show the Surround mode for three seconds. This button is also used to enter an output level setting when using the **Test Tone** and **Selector Buttons** 21 29.

**26 Delay:** Press this button to enter delay time settings.

**27 Channel Select:** Press this button during normal operation, or during the Test Tone operation, to begin the process that adjusts the output levels.

**NOTE:** Be sure to select the Dolby Pro Logic surround mode before calibration so that all five channels will be adjusted.

**28 Center Speaker Select Button:** Press this button to select the center channel speaker. When it is first pressed, the **Information Display** 30 will show the currently selected speaker type. Press it again to show another speaker type or no speaker option (this option is available with the Dolby Pro Logic surround mode only).

Release this button when a desired selection is shown in the **Information Display** 30.

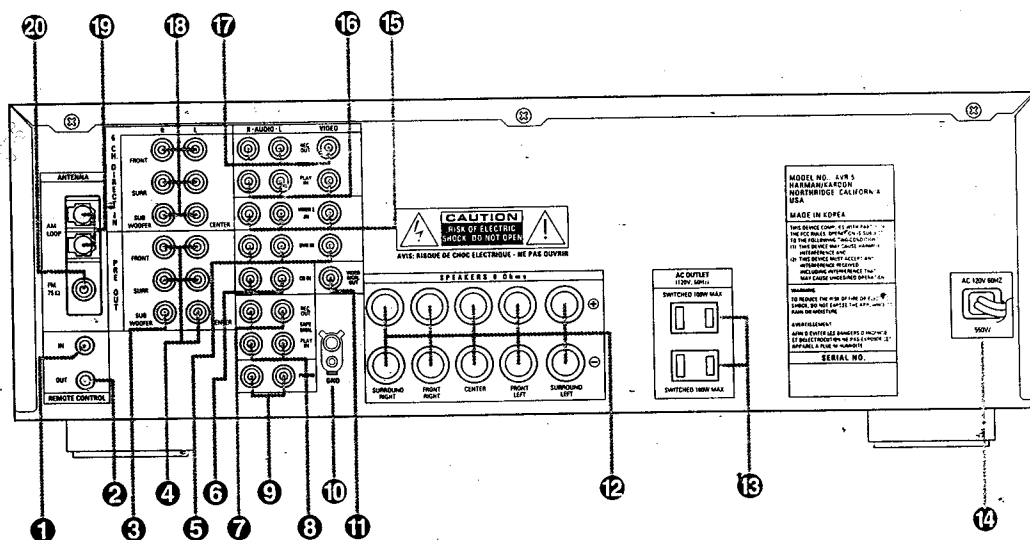
**29 Selector Buttons:** Press these buttons to adjust the AVR5/AVR18RDS output levels. You may use these buttons while you are checking the output levels by pressing either the **Test Tone Button** 21 or the **Channel Select Button** 27.

**NOTE:** Be sure to press the **Set Button** 25 to enter a new output level each time you adjust the channel.

**30 Information Display:** This display delivers messages and status indications to help you operate the receiver.

**31 Remote Sensor Window:** The sensor behind this window receives infrared signals from the remote control. Aim the remote at this area and do not block or cover it unless an external remote sensor is installed.

## Rear Panel Connections



**1 Remote IR In:** If the AVR5/AVR18RDS front panel IR sensor is blocked due to cabinet doors or other obstructions, an external IR sensor may be used. Connect the output of the sensor to this jack.

**2 Remote IR Out:** This connection permits the IR sensor in the receiver to serve other remote controlled devices. Connect this jack to the "IR IN" jack on Harman Kardon or other compatible equipment.

**3 Subwoofer Pre-Out:** Connect this jack to the line level input of a powered subwoofer. If an external subwoofer amplifier is used, connect this jack to the subwoofer amplifier input.

**4 Pre-Outs:** If external power amplifiers are used for any channels, connect them to these jacks.

**5 DVD Inputs:** Connect the analog audio outputs and composite video output of a DVD or LV player to these jacks.

**6 CD Inputs:** Connect these jacks to the output of a compact disc player or CD changer.

**7 Tape Monitor Out:** Connect these jacks to the RECORD/INPUT jacks of an audio recorder.

**8 Tape Monitor In:** Connect these jacks to the PLAY/OUT jacks of an audio recorder.

**9 Phono Inputs:** Connect the outputs of your turntable or tone arm to these jacks. Note that only Moving Magnet (MM) type cartridges may be used.

**10 Phono Ground:** Connect the ground wire from a turntable to this terminal to reduce system hum.

**11 TV Monitor Video Output:** Connect this jack to the standard (composite) video input of a TV monitor or video projector to view the output of any standard video source selected by the receiver's video switcher.

**12 Speaker Terminals:** Connect these terminals to the appropriate terminals on your speakers.

**13 Switched AC Outlets:** These outlets may be used to power any device that you wish to have turn on when the unit is turned on with the **System Power Control** switch **2**.

**NOTE:** The power consumption of the device plugged into each of these outlets should not exceed 100 watts.

**14 Power Cable:** Connect the AC plug to a non-switched AC wall output

**15 Video 2 Inputs:** Connect these jacks to the audio and video outputs of a TV Tuner, Cable TV converter box, satellite receiver or any other audio/video source.

**16 Video 1 Inputs:** Connect these jacks to the audio and video PLAY/OUT jacks of a VCR.

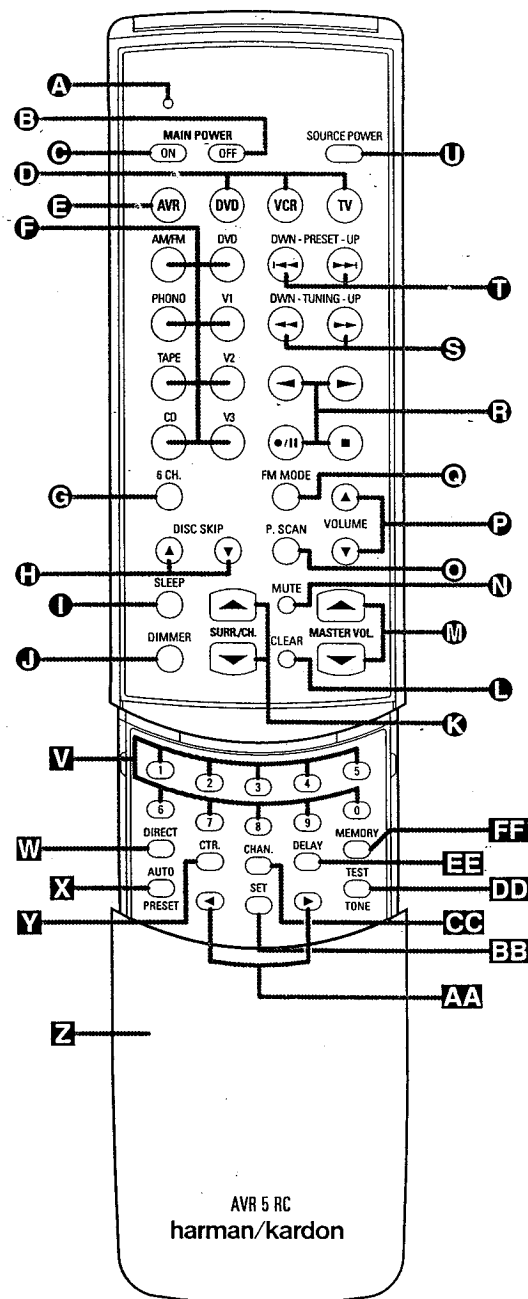
**17 Video Outputs 1:** Connect these jacks to the audio and video RECORD/IN jacks of a VCR.

**18 6-Channel Direct Inputs:** If an external digital audio decoder is used for 5.1 (Dolby Digital, DTS, etc.) audio, connect the outputs of that decoder to these terminals.

**19 AM Antenna:** Connect the AM loop antenna supplied with the receiver to these terminals. If an external AM antenna is used, make connections to the **AM** and **GND** terminals in accordance with the instructions supplied with the antenna.

**20 FM Antenna:** Connect an indoor or external FM antenna to this terminal.

# Remote Control Functions



**IMPORTANT NOTE:** The AVR5/AVR18RDS's remote may be programmed to control up to three additional devices, including the AVR5/AVR18RDS. Before using the remote, it is important to remember to press the **Device Control Selector** button **D** **E** that corresponds to the unit you wish to operate. The remote is capable of operating a wide variety of products using the control codes that are part of the remote.

It is also important to remember that many of the buttons on the remote take on different functions, depending on the product selected using the Device Control Selectors. The descriptions shown here primarily detail the functions of the remote when it is used to operate the AVR5/AVR18RDS.

**A LED Indicator:** This indicator will flash whenever a button is pressed to confirm that a remote command is being transmitted. It will also flash while the remote is being programmed to assist in entering or reading remote codes. Note that this is NOT a standard remote button, and has no function when pressed.

**E Main Power Off:** When the AVR5/AVR18RDS is turned on, press this button to place it in the Standby mode. Note that in this condition, the unit is still connect to AC Power.

**G Main Power On:** When the AVR5/AVR18RDS is in the Standby mode, as indicated by the **Power Indicator** **B** glowing green, press this button to turn the AVR5 on.

**D Device Control Selectors:** Press one of these buttons to use the remote to control the functions of another audio/video device. Note that the button will briefly turn red after it has been pressed to confirm your selection.

**B AVR Selector:** Press this button to use the remote control for operation of the AVR5/AVR18RDS. Note that the button will briefly turn red after it has been pressed to confirm your selection.

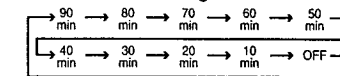
**F Source Selectors:** Press these buttons to select an input source for the AVR5/AVR18RDS. The AM/FM button is also used to switch between frequency bands when the tuner is in use.

**NOTE:** Pressing one of these buttons selects the source only. In order to control the actual source machine using the remote you must press the **Device Control Selector** button **D** for the desired product.

**G 6-Channel Direct:** Press this button to use the output of an optional, external digital decoder as the AVR5/AVR18RDS's input source.

**H Disc Skip:** These buttons do not have any functions when controlling the AVR5/AVR18RDS, but they operate the Disc Skip functions of compatible Harman Kardon compact disc changers. The Disc Skip Up button will also function as the Open/Close button for certain DVD and LD equipment when the remote is properly programmed to control them.

**I Sleep Button:** Press this button to place the unit in the Sleep mode. After the time shown in the display, the AVR5/AVR18RDS will automatically go into the Standby mode. Each press of the button changes the time until turn-off in the following order:



**J Dimmer:** Press this button once to reduce the brightness of the front panel display to half the normal intensity. Press it again to turn the front panel display completely off. When the display is completely off, press the button to return to normal brightness.

**K Surround/Channel Selectors:** Press these buttons to check or change the current Surround mode. When either one of these two buttons is first pressed, the **Information Display** **30** will show the current Surround mode. Press either button again to change the current Surround mode by scrolling the list of available modes as they appear in the **Information Display** **30**. When the remote is being used to control a VCR or TV set, these buttons are used to change channels. These buttons are also used when the remote is being programmed to "find" the correct codes via the Search mode.

**L Clear Button:** This button is used to clear preset memory information for the AVR5/AVR18RDS's tuner.

**M Master Volume:** Press these buttons to raise or lower the AVR5/AVR18RDS's volume. These buttons are also used to obtain the IR code numbers for a device that has been programmed into the remote.

**N Mute:** Press this button to momentarily silence the AVR5/AVR18RDS. When the AVR5/AVR18RDS remote is being programmed to operate another device, this button is pressed with the **Device Control Selector** button **D** to begin the programming process.

**O P-Scan:** Press this button to automatically scan through the list of stations that are programmed into the AVR5/AVR18RDS's tuner memory. When the button is pressed, each preset station will play for five seconds before the next station is selected. Press the button again when the desired station is heard to stop the preset scan.

**P Volume:** When the remote has been properly programmed for a compatible device, these buttons may be used to raise or lower the volume of a TV. Note that they DO NOT change the volume of the AVR5/AVR18RDS. That is done with the **Master Volume** button **M**.

**Q FM Mode:** Press this button when the tuner is in use in the FM band to switch to monaural reception if the station is weak and noisy. When the **MONO** indicator is on, FM reception will be monaural regardless of the strength of the tuned FM station.

**R Transport Controls:** These buttons are used to control Play, Play Forward, Play Reverse, Stop, Pause and Record functions on compatible Harman Kardon compact disc players/changers and cassette tape decks. When the remote has been programmed to control an external device, such as a VCR, DVD or LD; these buttons may be used to control the standard Forward, Reverse, Stop and Pause functions, as well.

**S Tuning Up/Down:** When the tuner is in use, these buttons will tune up or down through the selected frequency band. A brief (1/2 second) press of the button will manually tune to the next frequency increment, while pressing and holding the button for a longer period will automatically tune to the next station with a signal strong enough for acceptable reception. These buttons will also control Fast Forward and Fast Reverse (or Rewind) for compatible Harman Kardon compact disc players/changers and cassette tape decks, as well as controlling these functions on a DVD or VCR, if the remote has been properly programmed.

**T Preset Up/Down:** When the tuner is in use, these buttons scroll through the stations that have been programmed into the AVR5/AVR18RDS's memory. These buttons also control the track Skip Up and Down on compatible Harman Kardon

compact disc players/changers as well as controlling the similar functions on a DVD if the remote has been properly programmed.

**U Source Power:** When the remote has been properly programmed to control another product, and the **Device Control Selector** **D** for that device has been pressed, press this button to turn the product on or off.

**V Numeric Keys:** These buttons serve as a ten-button numeric keypad to enter tuner preset positions. They are also to be used to select channel numbers when **TV** or **VCR** has been selected on the remote, or to select track numbers on a DVD player, depending on how the remote has been programmed.

**W Direct:** Press this button to select a radio station by entering its frequency using the **Numeric Keys** **V**.

**X Auto Preset:** When the tuner and FM band have been selected, this button may be used to automatically program the tuner presets for all active stations. To start the auto preset scan, press and hold the button. Note that the **MEMO** and **PRESET** indicators will flash. After a few seconds, the tuner will start to "look" for active stations, as shown by increasing frequency numbers in the **Information Display**. Release the button and note that the tuner will briefly stop at each active station and add a preset number to the memory. If the FM tuner found less than 30 FM stations with acceptable signal strength, the Auto Preset tuning will scan two more cycles or until the remaining vacant preset memory spaces have been filled with those found in the first scan. The scan will stop when all 30 preset memory spaces have been filled or when three scans through the band have been completed.

**Y Center:** Use this button to configure the AVR5/AVR18RDS for the type of center channel speaker being used.

**Z Secondary Control Cover:** This sliding cover normally is in the "up" position so that it hides the secondary controls. To access these controls, place your thumb on the small recessed area at the top center of the control, and gently press the cover down and towards you.

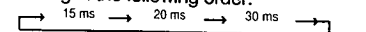
**AA </> Buttons:** These buttons are used to change settings during the level output adjustments with either the test tone or an external audio source.

**BB Set Button:** This button has two functions. If this button is pressed while in normal operation, the **Information Display** **30** will show the Surround mode for three seconds. This button is also used to enter an output level setting when using the **Test Tone** and **Selector** buttons **21** **22**.

**CC Channel Button:** Use this button to adjust the AVR5/AVR18RDS's output levels using an external audio source, rather than the internal test signal generator. Each press of the button will select a channel for adjustment. To trim the output level use the **</>** buttons

**DD Test Tone:** Press this button to start the procedure for adjusting the AVR5/AVR18RDS's output levels.

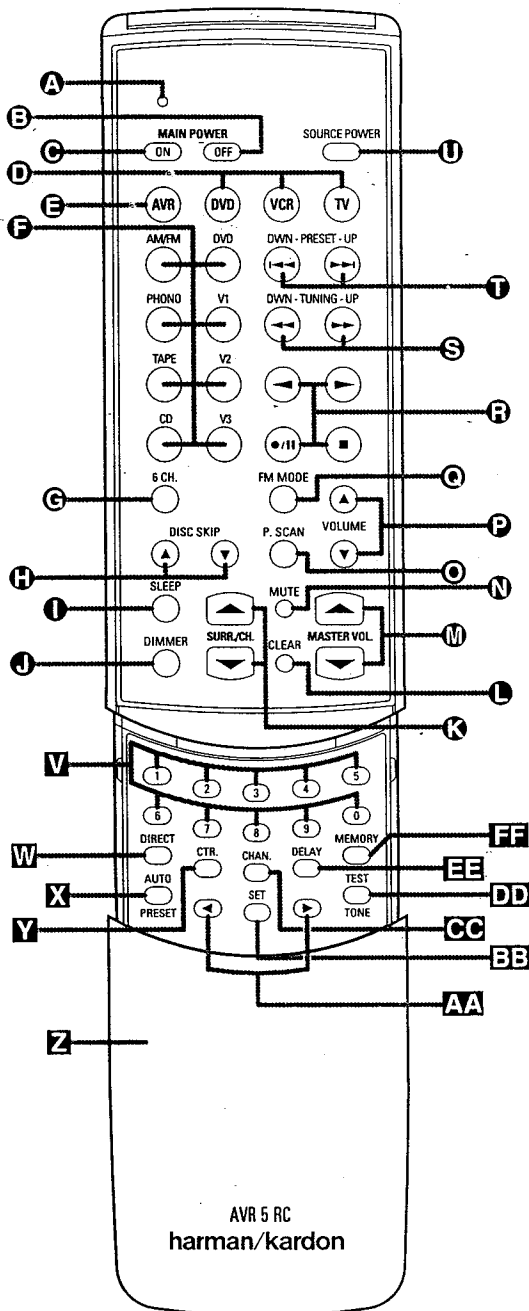
**EE Delay:** Press this button to change the AVR5/AVR18RDS's delay settings. To change the settings, first make certain that the Pro Logic mode has been selected. Then, each press of the button will change the delay setting in the following order:



**FF Memory:** Press this button to open a memory position that stores a preset location for the AVR5/AVR18RDS's tuner.



## Remote Control Functions



**IMPORTANT NOTE:** The AVR5/AVR18RDS's remote may be programmed to control up to three additional devices, including the AVR5/AVR18RDS. Before using the remote, it is important to remember to press the **Device Control Selector** button **D** **E** that corresponds to the unit you wish to operate. The remote is capable of operating a wide variety of products using the control codes that are part of the remote.

It is also important to remember that many of the buttons on the remote take on different functions, depending on the product selected using the Device Control Selectors. The descriptions shown here primarily detail the functions of the remote when it is used to operate the AVR5/AVR18RDS.

**A LED Indicator:** This indicator will flash whenever a button is pressed to confirm that a remote command is being transmitted. It will also flash while the remote is being programmed to assist in entering or reading remote codes. Note that this is NOT a standard remote button, and has no function when pressed.

**B Main Power Off:** When the AVR5/AVR18RDS is turned on, press this button to place it in the Standby mode. Note that in this condition, the unit is still connect to AC Power.

**C Main Power On:** When the AVR5/AVR18RDS is in the Standby mode, as indicated by the **Power Indicator** **B** glowing green, press this button to turn the AVR5 on.

**D Device Control Selectors:** Press one of these buttons to use the remote to control the functions of another audio/video device. Note that the button will briefly turn red after it has been pressed to confirm your selection.

**E AVR Selector:** Press this button to use the remote control for operation of the AVR5/AVR18RDS. Note that the button will briefly turn red after it has been pressed to confirm your selection.

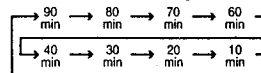
**F Source Selectors:** Press these buttons to select an input source for the AVR5/AVR18RDS. The AM/FM button is also used to switch between frequency bands when the tuner is in use.

**NOTE:** Pressing one of these buttons selects the source only. In order to control the actual source machine using the remote you must press the **Device Control Selector** button **D** for the desired product.

**G 6-Channel Direct:** Press this button to use the output of an external digital decoder as the AVR18RDS's input source.

**H Disc Skip:** These buttons have any functions when connected to the AVR5/AVR18RDS, but they operate the Disc Skip function on compatible Harman Kardon compact disc changers. The Skip Up button will also function as the Open/Close button for compact disc DVD and LD equipment when the remote is properly programmed to control them.

**I Sleep Button:** Press this button to place the unit in the Sleep mode. The time shown in the display, AVR5/AVR18RDS will automatically go into the Standby mode. Each press of the button changes the time turn-off in the following order:



**J Dimmer:** Press this button to reduce the brightness of the front panel display to half the normal intensity. Press it again to turn the front panel display completely off. When the display is completely off, press the button to return to normal brightness.

**K Surround/Channel Select:** Press these buttons to check and change the current Surround mode. When either one of these two buttons is first pressed, the **Information Display** **80** will show the current Surround mode. Press either button again to change the current Surround mode by scrolling through the available modes as they appear in the **Information Display** **80**. When the remote is being used to control a VCR or TV set, these buttons are used to change channel. These buttons are also used to find the correct codes via the Search mode.

**L Clear Button:** This button is used to clear preset memory information from the AVR5/AVR18RDS's tuner.

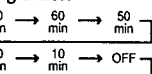
**M Master Volume:** Press these buttons to raise or lower the AVR5/AVR18RDS's volume. These buttons are also used to obtain the code numbers for a device that has been programmed into the remote.

st: Press this  
put of an optional,  
der as the AVR5/  
source.

se buttons do not  
when controlling  
DS, but they  
kip functions of  
Kardon

gers. The Disc  
also function as  
ton for certain  
ment when the  
programmed to

ress this button to  
Sleep mode. After  
e display, the  
will automatically  
mode. Each press  
s the time until  
ng order:



this button once  
tiness of the front  
if the normal  
gain to turn the  
completely off.  
s completely off,  
return to normal

nel Selectors:  
to check or  
Surround mode.  
these two buttons  
**Information**,  
w the current  
ess either button  
e current  
scrolling the list  
as they appear  
**Display** 20.  
being used to  
set, these but-  
ange channels.  
also used when  
programmed to  
odes via the

is button is used to  
information for the  
tuner.

Press these  
ver the  
volume. These  
to obtain the IR  
device that has  
to the remote.

**N Mute:** Press this button to momentarily silence the AVR5/ AVR18RDS. When the AVR5/ AVR18RDS remote is being programmed to operate another device, this button is pressed with the **Device Control Selector** button **D** to begin the programming process.

**P P-Scan:** Press this button to automatically scan through the list of stations that are programmed into the AVR5/ AVR18RDS's tuner memory. When the button is pressed, each preset station will play for five seconds before the next station is selected. Press the button again when the desired station is heard to stop the preset scan.

**P Volume:** When the remote has been properly programmed for a compatible device, these buttons may be used to raise or lower the volume of a TV. Note that they DO NOT change the volume of the AVR5/ AVR18RDS. That is done with the **Master Volume** button **M**.

**FM Mode:** Press this button when the tuner is in use in the FM band to switch to monaural reception if the station is weak and noisy. When the **MONO** indicator is on, FM reception will be monaural regardless of the strength of the tuned FM station.

**Transport Controls:** These buttons are used to control Play, Play Forward, Play Reverse, Stop, Pause and Record functions on compatible Harman Kardon compact disc players/ changers and cassette tape decks. When the remote has been programmed to control an external device, such as a VCR, DVD or LD; these buttons may be used to control the standard Forward, Reverse, Stop and Pause functions, as well.

**Tuning Up/Down:** When the tuner is in use, these buttons will tune up or down through the selected frequency band. A brief (1/2 second) press of the button will manually tune to the next frequency increment, while pressing and holding the button for a longer period will automatically tune to the next station with a signal strong enough for acceptable reception. These buttons will also control Fast Forward and Fast Reverse (or Rewind) for compatible Harman Kardon compact disc players/ changers and cassette tape decks, as well as controlling these functions on a DVD or VCR, if the remote has been properly programmed.

**Preset Up/ Down:** When the tuner is in use, these buttons scroll through the stations that have been programmed into the AVR5/ AVR18RDS's memory. These buttons also control the track Skip Up and Down on compatible Harman Kardon

compact disc players/ changers as well as controlling the similar functions on a DVD if the remote has been properly programmed.

**Source Power:** When the remote has been properly programmed to control another product, and the **Device Control Selector** **D** for that device has been pressed, press this button to turn the product on or off.

**Numeric Keys:** These buttons serve as a ten-button numeric keypad to enter tuner preset positions. They are also to be used to select channel numbers when **TV** or **VCR** has been selected on the remote, or to select track numbers on a DVD player, depending on how the remote has been programmed.

**Direct:** Press this button to select a radio station by entering its frequency using the **Numeric Keys** **V**.

**Auto Preset:** When the tuner and FM band have been selected, this button may be used to automatically program the tuner presets for all active stations. To start the auto preset scan, press and hold the button. Note that the **MEMO** and **PRESET** indicators will flash. After a few seconds, the tuner will start to "look" for active stations, as shown by increasing frequency numbers in the **Information Display**. Release the button and note that the tuner will briefly stop at each active station and add a preset number to the memory. If the FM tuner found less than the 30 FM stations with acceptable signal strength, the Auto Preset tuning will scan two more cycles or until the remaining vacant preset memory spaces have been filled with those found in the first scan. The scan will stop when all 30 preset memory spaces have been filled or when three scans through the band have been completed.

**Center:** Use this button to configure the AVR5/ AVR18RDS for the type of center channel speaker being used.

**Secondary Control Cover:** This sliding cover normally is in the "up" position so that it hides the secondary controls. To access these controls, place your thumb on the small recessed area at the top center of the control, and gently press the cover down and towards you.

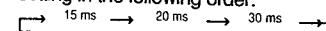
**AA </> Buttons:** These buttons are used to change settings during the level output adjustments with either the test tone or an external audio source.

**Set Button:** This button has two functions. If this button is pressed while in normal operation, the **Information Display** 20 will show the Surround mode for three seconds. This button is also used to enter an output level setting when using the **Test Tone** and **Selector** buttons 21 29.

**Channel Button:** Use this button to adjust the AVR5/ AVR18RDS's output levels using an external audio source, rather than the internal test signal generator. Each press of the button will select a channel for adjustment. To trim the output level use the </> buttons

**Test Tone:** Press this button to start the procedure for adjusting the AVR5/ AVR18RDS's output levels.

**Delay:** Press this button to change the AVR5/ AVR18RDS's delay settings. To change the settings, first make certain that the Pro Logic mode has been selected. Then, each press of the button will change the delay setting in the following order.

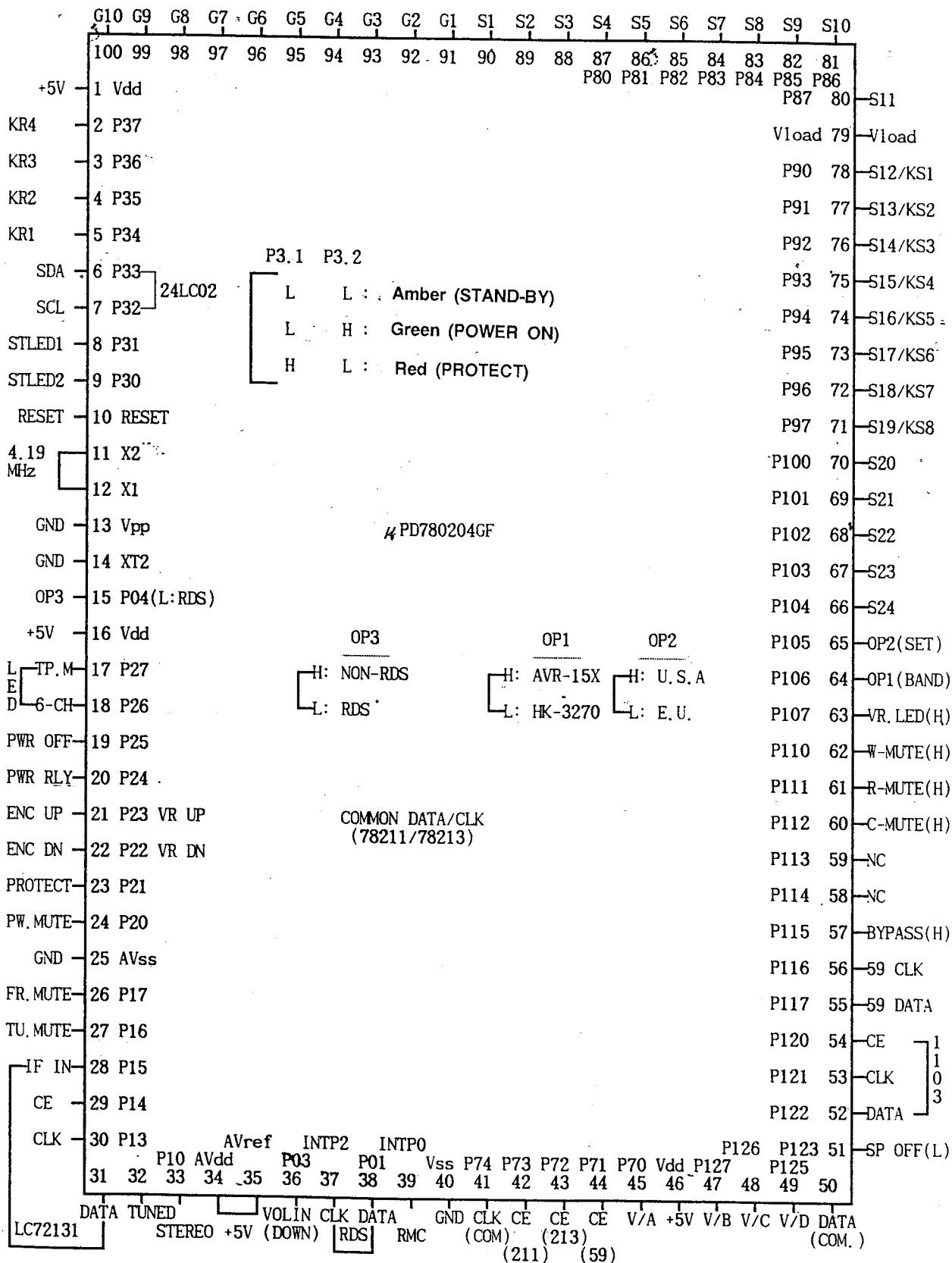


**Memory:** Press this button to open a memory position that stores a preset location for the AVR5/ AVR18RDS's tuner.

## CIRCUIT DESCRIPTION

CPU(IC701):  $\mu$ PD780204GF

## 1. Pin Description &amp; Block Diagram



## 2. Input and Output Terminal Functions

## &lt; CPU PIN DISCRIPTION &gt;

μPD780204GF QFP TYPE

| PIN NO | PIN NAME | I/O | ACTIVE | PORT NAME      | REMARK  |
|--------|----------|-----|--------|----------------|---|
| 1      | Vdd      | -   | H      | +5 V           | SYSTEM POWER SUPPLY                           |
| 2      | P37      | I   | H      | KR4            | KEY READ 4                                    |
| 3      | P36      | I   | H      | KR3            | KEY READ 3                                    |
| 4      | P35      | I   | H      | KR2            | KEY READ 2                                    |
| 5      | P34      | I   | H      | KR1            | KEY READ 1                                    |
| 6      | P33      | I/O | H      | SDA            | EEPROM DATA } 24LC02                          |
| 7      | P32      | O   | H      | SCL            | EEPROM CLOCK }                                |
| 8      | P31      | O   | H/L    | PWR LED1       | L Amber } L Green } H Red                     |
| 9      | P30      | O   | H/L    | PWR LED2       | L STBY } H POWER } L PROT }                   |
| 10     | RESET    | I   | L      | SYSTEM RESET   | LOW RESET                                     |
| 11     | X2       | -   | -      | MAIN OSC.      | MAIN SYSTEM OSCILLATION                       |
| 12     | X1       | I   | -      | 4.19MHz        |   |
| 13     | Vpp      | -   | L      | connect to Vss | PROM WRITING                                  |
| 14     | XT2      | -   | -      | OPEN           | NOT USED                                      |
| 15     | P04      | I   | L      | OP3            | OPTION "L": RDS                               |
| 16     | Vdd      | -   | H      | +5 V           | SYSTEM POWER SUPPLY                           |
| 17     | P27      | O   | H      | TAPE/M LED     | TAPE MONITOR LED                              |
| 18     | P26      | O   | H      | 6-CH LED       | 6-CHANNEL LED                                 |
| 19     | P25      | I   | L      | POWER OFF      | POWER OFF: "L"                                |
| 20     | P24      | O   | H      | POWER RELAY    | POWER ON: "H"                                 |
| 21     | P23      | I/O | H/L    | ENCODER/VR, UP | AVR5/18: ENCODER IN<br>HK3270 : VOLUME OUTPUT |
| 22     | P22      | I/O | H/L    | ENCODER/VR, DN |   |
| 23     | P21      | I   | L      | PROTECT        | PROTECT DETECT IN : "L"                       |
| 24     | P20      | O   | L      | POWER MUTE     | MUTE ON: "L"                                  |
| 25     | AVss     | -   | L      | GND            | A/D GND                                       |
| 26     | P17      | O   | L      | F_MUTE         | MUTE ON: "L"                                  |
| 27     | P16      | O   | H      | T_MUTE         | MUTE ON: "H"                                  |
| 28     | P15      | I   | H/L    | IF IN          | IF COUNTER IN (LC7218)                        |
| 29     | P14      | O   | H      | PLL CE         | PLL CHIP ENABLE (LC7218)                      |
| 30     | P13      | O   | H      | PLL CLK        | PLL CLOCK (LC7218)                            |
| 31     | P12      | O   | H      | PLL DATA       | PLL DATA (LC7218)                             |
| 32     | P11      | I   | L      | TUNED          | TUNED IN ON: "L"                              |

| PIN.NO | PIN NAME | I/O | ACTIVE | PORT NAME    | R E M A R K                 |
|--------|----------|-----|--------|--------------|-----------------------------|
| 33     | P10      | I   | L      | STEREO       | STEREO IN ON: "L"           |
| 34     | AVdd     | -   | H      | +5 V         | A/D Vdd                     |
| 35     | AVref    | I   | L      | GND          | A/D GND                     |
| 36     | INTP3    | I   | L      | ENC IN(DOWN) | ENCODER IN (DOWN)           |
| 37     | INTP2    | I   | L      | CLK RDS      | RDS CLOCK IN "L"            |
| 38     | P01      | I   | H      | DATA RDS     | RDS DATA IN                 |
| 39     | INTP0    | I   | L      | REMOCON IN   | REMOCON IN                  |
| 40     | Vss      | -   | L      | GND          | SYSTEM GND                  |
| 41     | P74      | O   | H      | CLK (COMMON) | COMMON CLOCK(7821-1/-3)     |
| 42     | P73      | O   | H      | CE (7821-1)  | CHIP ENABLE(7821-1)         |
| 43     | P72      | O   | H      | CE (7821-3)  | CHIP ENABLE(7821-3)         |
| 44     | P71      | O   | H      | CE (9459)    | VOLUME IC CHIP ENABLE(9459) |
| 45     | P70      | O   | H/L    | VID A        | VIDEO CONTROL A             |
| 46     | Vdd      | -   | H      | +5 V         | POWER SUPPLY                |
| 47     | P127     | O   | H/L    | VID B        | VIDEO CONTROL B             |
| 48     | P126     | O   | H/L    | VID C        | VIDEO CONTROL C             |
| 49     | P125     | O   | H/L    | VID D        | VIDEO CONTROL D             |
| 50     | P124     | O   | H      | DATA(COMMON) | COMMON DATA(7821-1/-3)      |
| 51     | P123     | I   | L      | SP OFF       | SPEAKER OFF: "L"            |
| 52     | P122     | O   | H      | DATA(1103)   | DOLBY IC. 1103 DATA         |
| 53     | P121     | O   | L      | CLK (1103)   | CLOCK                       |
| 54     | P120     | O   | L      | CE. (1103)   | CHIP ENABLE                 |
| 55     | P117     | O   | H      | DATA(9459)   | VOLUME IC. TC9459 DATA      |
| 56     | P116     | O   | H      | CLK (9459)   | CLOCK                       |
| 57     | P115     | O   | H      | BYPASS(1103) | DOLBY IC. 1103 BYPASS: "H"  |
| 58     | P114     | O   | -      | REMAINED     | REMAINED                    |
| 59     | P113     | O   | -      | REMAINED     | REMAINED                    |
| 60     | P112     | O   | L      | C_MUTE       | CENTER MUTE ON: "L"         |
| 61     | P111     | O   | L      | R_MUTE       | REAR MUTE ON: "L"           |
| 62     | P110     | O   | L      | W_MUTE       | WOOFER MUTE ON: "L"         |
| 63     | P107     | O   | H      | VR. LED      | VOLUME LED ON: "H"          |
| 64     | P106     | O   | L/H    | OP1          | H: USA BAND, L: EU. BAND    |
| 65     | P105     | O   | L/H    | OP2          | H: AVR5/18, L: HK3270       |
| 66     | FIP33    | O   | H      | S24          | FIP SEGMENT OUTPUT          |
| 67     | FIP32    | O   | H      | S23          |                             |
| 68     | FIP31    | O   | H      | S22          |                             |
| 69     | FIP30    | O   | H      | S21          |                             |

| PIN NO | PIN NAME | I/O | ACTIVE | PORT NAME | R E M A R K          |
|--------|----------|-----|--------|-----------|----------------------|
| 70     | FIP29    | 0   | H      | S20       | FIP SEGMENT OUTPUT   |
| 71     | FIP28    | 0   | H      | S19/KS8   | FIP SEG19/KEY SCAN 8 |
| 72     | FIP27    | 0   | H      | S18/KS7   | 18/KEY SCAN 7        |
| 73     | FIP26    | 0   | H      | S17/KS6   | 17/KEY SCAN 6        |
| 74     | FIP25    | 0   | H      | S16/KS5   | 16/KEY SCAN.5        |
| 75     | FIP24    | 0   | H      | S15/KS4   | 15/KEY SCAN 4        |
| 76     | FIP23    | 0   | H      | S14/KS3   | 14/KEY SCAN 3        |
| 77     | FIP22    | 0   | H      | S13/KS2   | 13/KEY SCAN 2        |
| 78     | FIP21    | 0   | H      | S12/KS1   | 12/KEY SCAN 1        |
| 79     | Vload    | -   | -      | Vload     | FIP DRIVER VOLTAGE   |
| 80     | FIP20    | 0   | H      | S11       | FIP SEGMENT OUTPUT   |
| 81     | FIP19    | 0   | H      | S10       |                      |
| 82     | FIP18    | 0   | H      | S9        |                      |
| 83     | FIP17    | 0   | H      | S8        |                      |
| 84     | FIP16    | 0   | H      | S7        |                      |
| 85     | FIP15    | 0   | H      | S6        |                      |
| 86     | FIP14    | 0   | H      | S5        |                      |
| 87     | FIP13    | 0   | H      | S4        |                      |
| 88     | FIP12    | 0   | H      | S3        |                      |
| 89     | FIP11    | 0   | H      | S2        |                      |
| 90     | FIP10    | 0   | H      | S1        |                      |
| 91     | FIP9     | 0   | H      | G1        | FIP GRID OUTPUT      |
| 92     | FIP8     | 0   | H      | G2        |                      |
| 93     | FIP7     | 0   | H      | G3        |                      |
| 94     | FIP6     | 0   | H      | G4        |                      |
| 95     | FIP5     | 0   | H      | G5        |                      |
| 96     | FIP4     | 0   | H      | G6        |                      |
| 97     | FIP3     | 0   | H      | G7        |                      |
| 98     | FIP2     | 0   | H      | G8        |                      |
| 99     | FIP1     | 0   | H      | G9        |                      |
| 100    | FIP0     | 0   | H      | G10       |                      |

## 3. KEY MATRIX IN THE CPU (Front Panel)

|                                 | P34/KR1<br>(IC701 Pin5)          | P35/KR2<br>(IC701 Pin4) | P36/KR3<br>(IC701 Pin3)    | P37/KR4<br>(IC701 Pin2)        |
|---------------------------------|----------------------------------|-------------------------|----------------------------|--------------------------------|
|                                 | DELAY                            | SP CHANNEL              | CENTER MODE                | << SET(&)                      |
|                                 | 8010                             | 8020                    | 8040                       | 8080                           |
| S19/KS8<br>P97<br>(IC701 Pin71) | SET                              | SET >>(&)               | MUTE<br>/*MUTE             | SURR OFF                       |
|                                 | 4010                             | 4020                    | 4040                       | 4080                           |
| S18/KS7<br>P96<br>(IC701 Pin72) | TEST TONE                        | THEATER                 | HALL2                      | HALL1                          |
|                                 | 2010                             | 2020                    | 2040                       | 2080                           |
| S17/KS6<br>P95<br>(IC701 Pin73) | 3 STEREO                         | PRO. LOGIC              | FM MODE<br>/*FM MODE       | PRE UP(&)<br>/*PRE UP(&)       |
|                                 | 1010                             | 1020                    | 1040                       | 1080                           |
| S16/KS5<br>P94<br>(IC701 Pin74) | PRE DOWN(&)/<br>*PRE DOWN<br>(*) | PRE SCAN<br>/*PRE SCAN  | TUNNING UP<br>/*TUNNING UP | TUNNING IN(&)<br>/*TUNN- IN(&) |
|                                 | 0810                             | 0820                    | 0840                       | 0880                           |
| S15/KS4<br>P93<br>(IC701 Pin75) | AM / FM<br>/*FM                  | 6-CH<br>/*AM            | VIDEO3                     | VIDEO2                         |
|                                 | 0410                             | 0420                    | 0440                       | 0480                           |
| S14/KS3<br>P92<br>(IC701 Pin76) | VIDEO1/<br>*AUX                  | DVD<br>/*TAPE2          | CD<br>/*CD                 | TAPE MON<br>/*TAPE MON         |
|                                 | 0210                             | 0220                    | 0240                       | 0280                           |
| S13/KS2<br>P91<br>(IC701 Pin77) | ST-BY/<br>*ST-BY                 | PHONO/<br>*PHONO        | PTY<br>/*PTY               | DISPLAY<br>/*DISPLAY           |
|                                 | 0110                             | 0120                    | 0140                       | 0180                           |
| S12/KS1<br>P90<br>(IC701 Pin78) |                                  |                         |                            |                                |

\*: HK-3270  
&: KEY

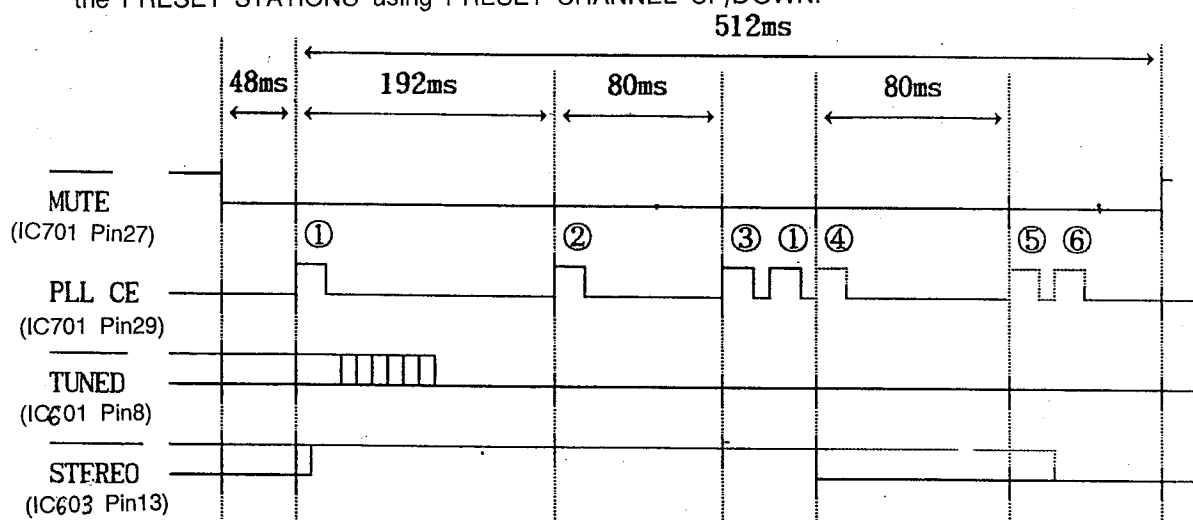
|   |               |                  |                |                    |
|---|---------------|------------------|----------------|--------------------|
| R | DIMMER (A010) | SURR DOWN (A020) | SURR UP (A040) | AUTO PRESET (A080) |
| E | MEMORY (B010) | DIRECT (B020)    | VR. UP (B040)  | VR. DOWN (B080)    |
| M | PWR ON (C010) | PWR OFF (C020)   | SLEEP (C040)   | CLEAR (C080)       |
| N | NO. 1 (D010)  | NO. 2 (D020)     | NO. 3 (D040)   | NO. 4 (D080)       |
| O | NO. 5 (E010)  | NO. 6 (E020)     | NO. 7 (E040)   | NO. 8 (E080)       |
| L | NO. 9 (F010)  | NO. 0 (F020)     | AUX (F040)     | TAPE2 (F080)       |
| T |               |                  |                |                    |
| Y |               |                  |                |                    |
| E |               |                  |                |                    |

#### 4. TIMING CHART (IF COUNT)

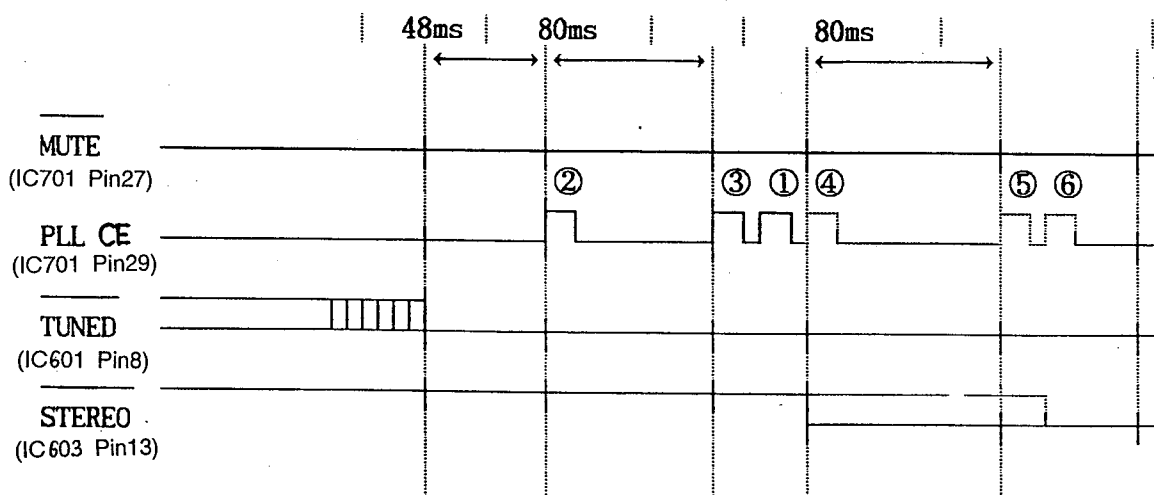
- ① PLL MODE-1
- ② PLL MODE-2
- ③ PLL MODE-3
- ④ PLL MODE-4
- ⑤ PLL MODE-5
- ⑥ PLL MODE-6

A dotted line (.....) : In case that IF COUNT is not proper, follow PLL MODE of ④, ⑤, ⑥.

- When changing BAND, selecting the PRESET STATIONS using TEN KEY and selecting the PRESET STATIONS using PRESET CHANNEL UP/DOWN.



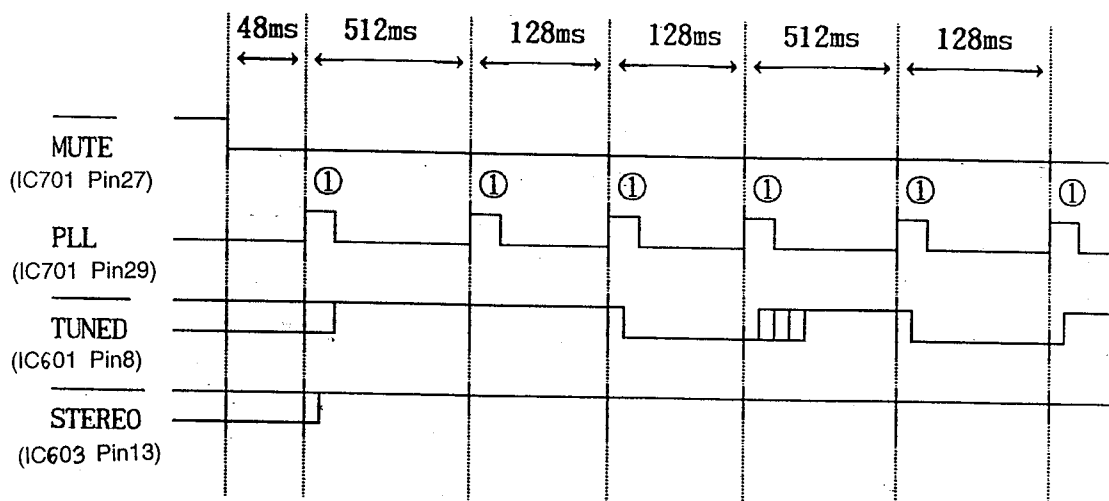
When IF COUNT is not proper in case that the frequency is not tuned,





- MANUAL TUNING UP/DOWN

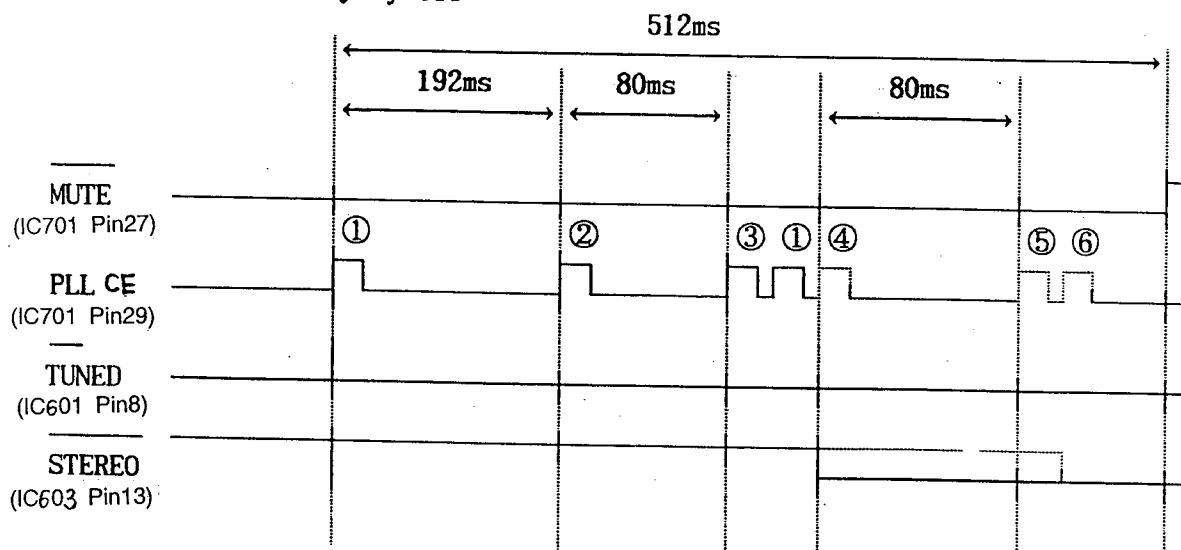
↓ KEY ON



(EXAMPLE) 87.5MHz → 108.0MHz  
108.0MHz → 87.5MHz

- MANUAL TUNING UP/DOWN key OFF

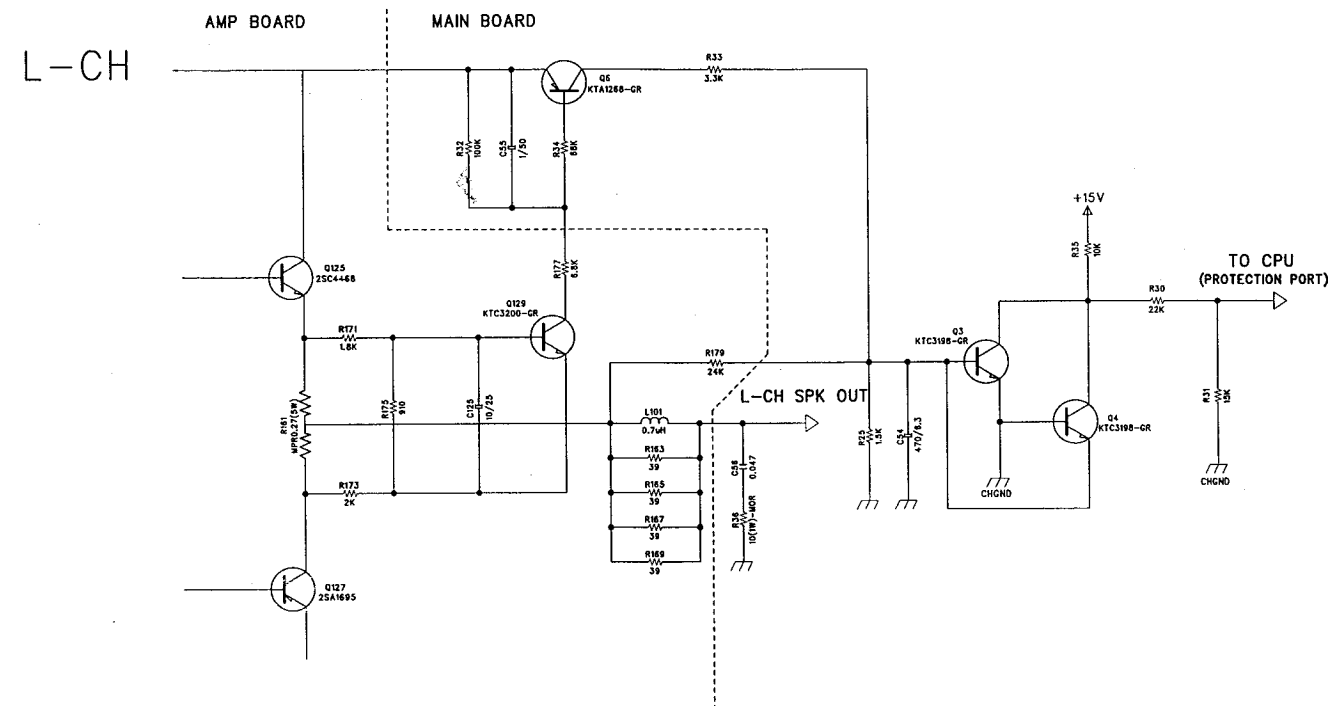
↓ key off





## SPEAKER PROTECTION CIRCUIT

It makes the protection port of the CPU to low state.  
Then all channels are muted and the display is turned off.

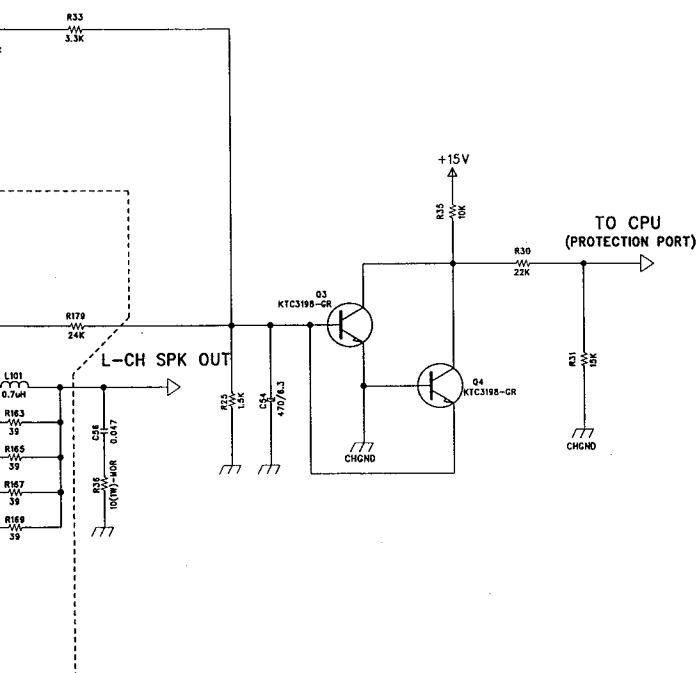




speakers when an abnormally high current flows in Q157, Q158, Q174 due to excessive input drive, speaker terminals. If current increase is excessive R242 turns on Q129, Q130, Q159, Q160, Q175

state.

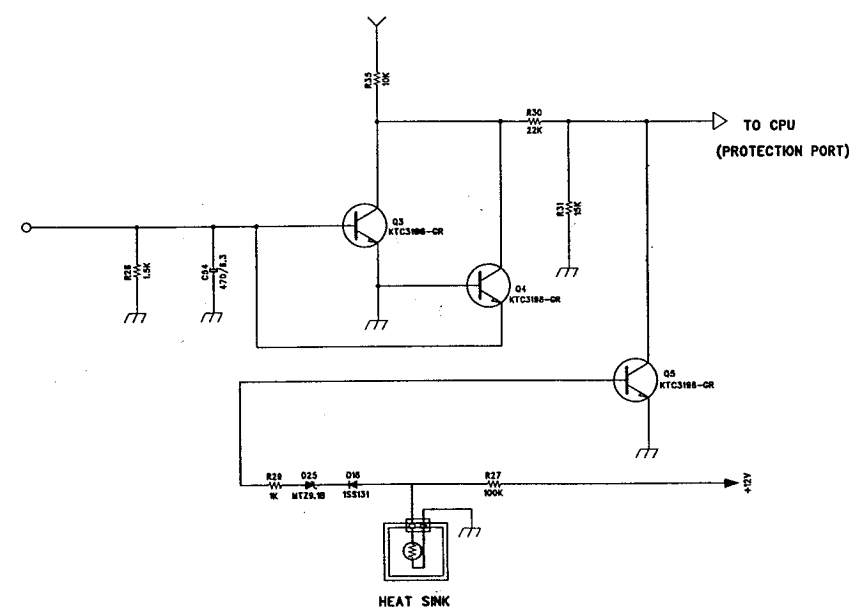
s turned off.



### THERMAL PROTECTION CIRCUIT

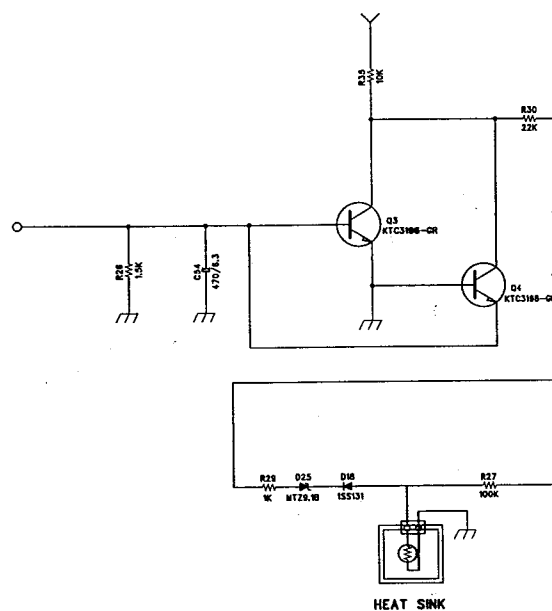
This receiver has a overload thermal protection circuits to guard against abnormal operation. When the temperature of H/SINK POSISTOR rises abnormally, resistance of the posistor becomes larger and Q3 is turned on.

It makes the protection port of the CPU to low state. Then all channels are muted and the display is off.

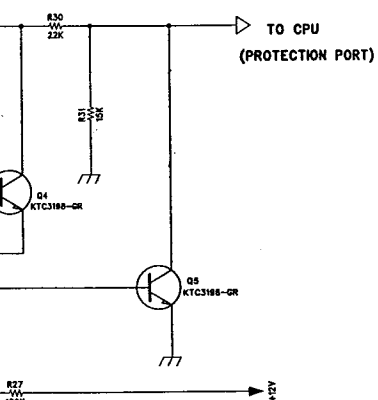


## THERMAL PROTECTION CIRCUIT

This receiver has a overload thermal protection circuits. When the temperature of H/SINK POSISTOR rises and becomes larger and Q3 is turned on. It makes the protection port of the CPU to low state. The display is off.

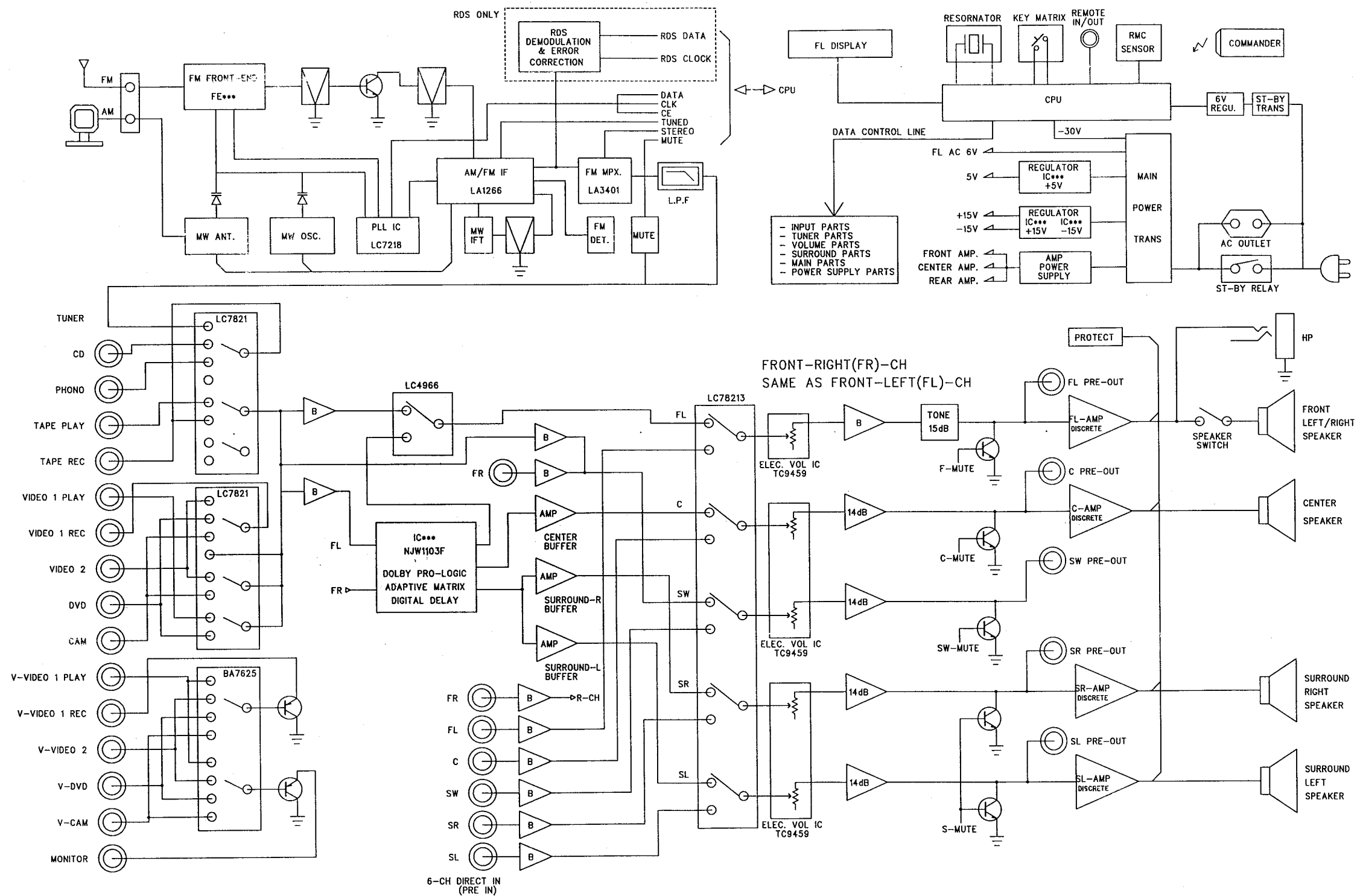


circuits to guard against abnormal operation.  
 rises abnormally, resistance of the posistor  
 state. Then all channels are muted and the

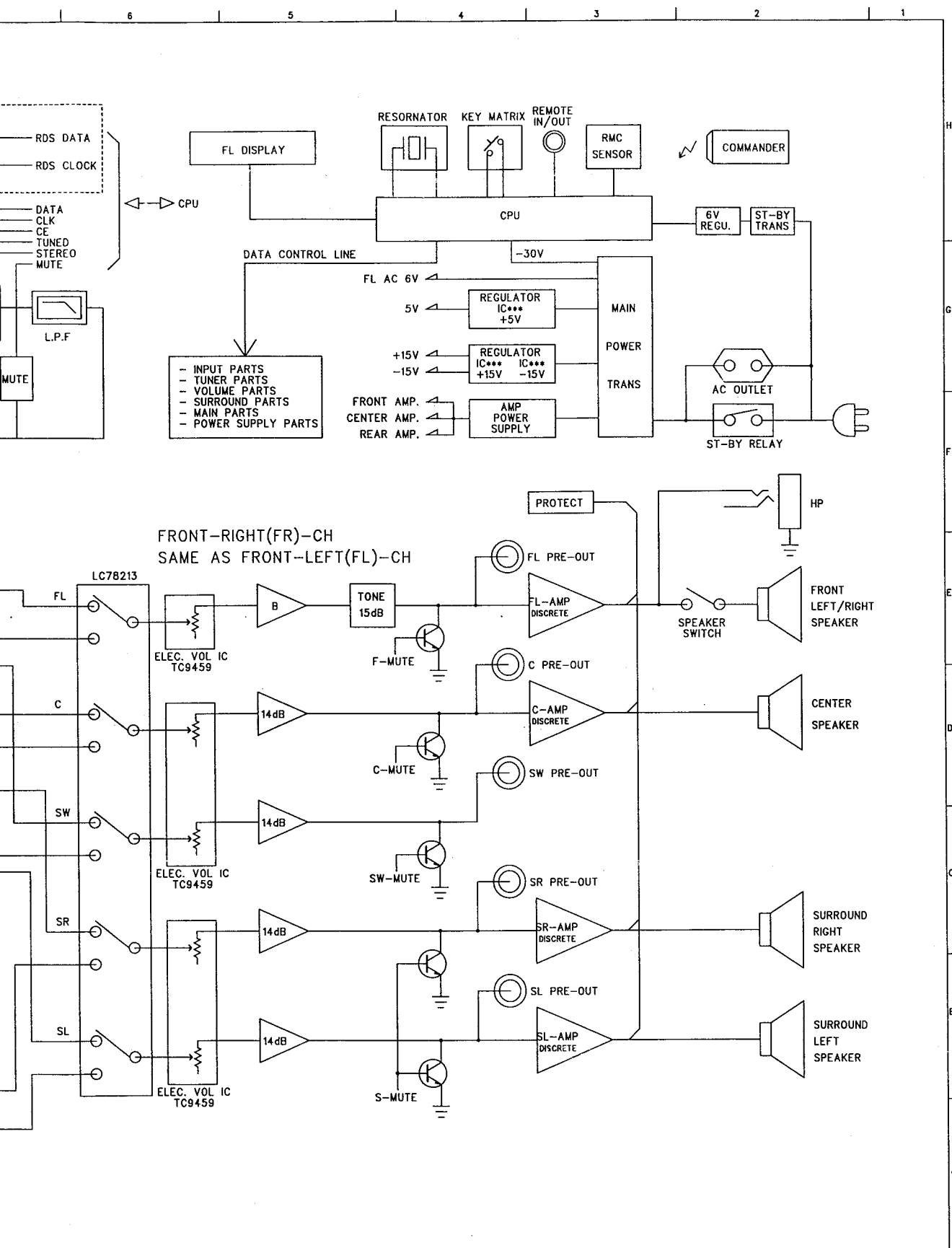




# BLOCK DIAGRAM







## DISASSEMBLY PROCEDURES

( Refer to pages 25 ~ 29 )

### 1 CHASSIS TOP <35> REMOVAL

Remove 9 screws <A, H> and then remove the Chassis Top <35>.

### 2 FRONT PANEL ASS'Y <AA> REMOVAL

1. Remove the Chassis Top <35>, referring to the previous step 1.
2. Disconnect the connector <CN701> from connector <CW10> on the Main P. C. Board <1>.
3. Disconnect the lead wire <CW701> from connector <CW 17> on the Main P.C. Board <1>.
4. Disconnect the lead wire <CW 706> from connector <CN 902> on the Video P.C. Board <10>.
5. Disconnect the lead wire <CW 706> from connector <CN 403> on the Input P.C. Board <10>.
6. Remove 1 screw <1> of Chassis Panel and then lead wire <CH 702> on the Tone P.C. Board <C>.
7. Disconnect the lead wire <CW 705> from connector <CN 803> on the Pre Out P.C. Board <1>.
8. Disconnect the lead wire <CN 709> from connector <CN 102> on the Amp P.C. Board <1>.
9. Disconnect the lead wire <CN 708> from connector <CW 4> on the Main P.C. Board <1>.
10. Remove 1 screw <1> of the Chassis Panel and then lead wire <CH 703> on the Speaker P.C. Board <C>.
11. Disconnect the connector <CW 19> from connector <CW 2> on the Main P.C. Board <1>.
12. Remove 9 screws <C, 1, H> and then remove the Front Panel Ass'y <AA>.

### 3 FRONT P. C. BOARD <10> REMOVAL

1. Remove the Chassis Top <35>, referring to the previous step 1.
2. Remove the Front Panel Ass'y <AA>, referring to the previous step 2.
3. Disconnect the connector <CN702> from lead wire <CW702> on the Power P. C. Board <1>.
4. Disconnect the lead wire <CW704> from connector <CN704> on the Volume P. C. Board <10>.
5. Disconnect the lead wire <CW703> from connector <CN703> on the Mute P. C. Board <A>.
6. Remove 13 screws <1> and then remove the Front P.C. Board <10>.

### 4 VOLUME P.C. BOARD <10> REMOVAL

1. Remove the Chassis Top <35>, referring the previous step 1.
2. Remove the Front Panel Ass'y <AA>, referring to the previous step 2.
3. Pull out the Volume knob <1>.
4. Disconnect the lead wire <CN704> from lead wire <CW704> on the Front P. C. Board <10>.
5. Remove 1 hexagon nut <2>, 1 washer <3> and then remove the volume P. C. Board <10>.

### 5 MUTE P.C. BOARD <A> REMOVAL

1. Remove the Chassis Top <35>, referring to the previous step 1.
2. Remove the Front Panel Ass'y <AA>, referring to the previous step 2.
3. Disconnect the connector <CN703> from lead wire <CW703> on the Front P. C. Board <10>.
4. Remove 2 screws <1> and then remove the Mute P.C. Board <A>.

### 6 VIDEO 2 P. C. BOARD <10> REMOVAL

1. Remove the Chassis Top <35>, referring to the previous step 1.
2. Remove the Front Panel Ass'y <AA>, referring to the previous step 2.
3. Remove 2 screws <1> and then remove the Video 2 P.C. Board <10>.
4. Pull out the shield Video <8>.

### 7 TONE P. C. BOARD <C> REMOVAL

1. Remove the Chassis Top <35>, referring to the previous step 1.
2. Remove the Front Panel Ass'y <AA>, referring to the previous step 2.
3. Pull out the Balance knob <5>.
4. Remove 4 screws <1> and then remove the Tone P.C. Board Ass'y <AC>.
5. Remove 4 hexagon nut <2>, and then remove the Shield Balance <9>.

**⑧ SPEAKER P. C. BOARD <㉔> REMOVAL**

1. Remove the Chassis Top<㉓>, referring to the previous step ①.
2. Remove the Front Panel Ass'y <AA>, referring to the previous step ②.
3. Remove 3 screws <㉒, ①> and then remove the Speaker P.C. Board<㉔>.

**⑨ POWER P. C. BOARD <㉕> REMOVAL**

1. Remove the Chassis Top<㉓>, referring to the previous step ①.
2. Remove the Front Panel Ass'y <AA>, referring to the previous step ②.
3. Disconnect the lead wire <CW702> from connector <CN702> on the Front P. C. Board<㉕>.
4. Remove 2 screws <①> and then remove the Power P.C. Board<㉕>.

**⑩ STANDBY P. C. BOARD <㉖> REMOVAL**

1. Remove the Chassis Top<㉓>, referring to the previous step ①.
2. Remove the Front Panel Ass'y <AA>, referring to the previous step ②.
3. Remove 2 screws <①> and then remove the Standby P.C. Board<㉖>.

**⑪ RADIATOR ASS'Y <AB> REMOVAL**

1. Remove the Chassis Top<㉓>, referring to the previous step ①.
2. Remove 1 screw <①> and then remove the Bracket PCB<㉔>.
3. Disconnect the connector <CN102> from lead wire <CN708> on the Speaker P. C. Board<㉔>.
4. Disconnect the lead wire <CW103> from connector <CW16> on the Main P. C. Board<①>.
5. Disconnect the lead wire <CW104> from connector <CW5> on the Main P. C. Board<①>.
6. Disconnect the lead wire <JW368 AREA, 1P> from connector <L/V PW-01> on the Main P. C. Board<①>.
7. Disconnect the connector <CN101> from lead wire <CW801> on the Free Out P. C. Board<①>.
8. Remove 1 screw <㉑> of the Radiator<㉑> and then disconnect the connector <CW 8> on the Main P. C. Board<①>.
9. Remove 4 screws <①> and then remove the Radiator Ass'y <AB>.

**⑫ AMP P.C. BOARD <①> REMOVAL**

1. Remove the Chassis Top<㉓>, referring to the previous step ①.
2. Remove the Radiator Ass'y <AB>, referring to the previous step ⑪.
3. Remove 5 screws <㉑> and then remove the Amp P.C. Board<①>.

**⑬ TUNER P.C. BOARD <㉗> REMOVAL**

1. Remove the Chassis Top<㉓>, referring to the previous step ①.
2. Remove 2 screws <㉒, ㉓> and then remove the Tuner P.C. Board<㉗>.

**⑭ PRE OUT P. C. BOARD <①> REMOVAL**

1. Remove the Chassis Top<㉓>, referring to the previous step ①.
2. Remove 1 screw <①> and then remove the Bracket PCB<㉔>.
3. Disconnect the lead wire <CW803> from connector <CN404> on the Input P. C. Board<㉗>.
4. Disconnect the lead wire <CW807> from connector <CN405> on the Input P. C. Board<㉗>.
5. Disconnect the connector <CN803> from lead wire <CW705> on the Tone P. C. Board<㉘>.
6. Disconnect the lead wire <CW801> from connector <CN101> on the Amp P. C. Board<①>.
7. Remove 4 screws <㉒, ㉓> and then remove the Pre Out P. C. Board<①>.

**15 INPUT P. C. BOARD <10> REMOVAL**

1. Remove the Chassis Top<35>, referring to the previous step 11.
2. Remove 1 screw <1> and then remove the Bracket Pcb<2>.
3. Disconnect the connector <CN404> from lead wire <CW803> on the Free Out P. C. Board<1>.
4. Disconnect the connector <CN403> from lead wire <CW706> on the Video 2 P. C. Board<10>.
5. Disconnect the connector <CN405> from lead wire <CW807> on the Free Out P. C. Board<1>.
6. Remove 1 screw <C> of the Main P. C. Board <1> and then the lead wire <C541 AREA, 1P> on the Input P. C. Board<10>.
7. Remove 5 screws <K, C> and then remove the Input P. C. Board<10>.

**16 VIDEO P. C. BOARD <10> REMOVAL**

1. Remove the Chassis Top<35>, referring to the previous step 11.
2. Disconnect the connector <CN902> from lead wire <CW706> on the Video 2 P. C. Board<10>.
3. Remove 3 screws <K, C> and then remove the Video P. C. Board<10>.

**17 MAIN P. C. BOARD <1> REMOVAL**

1. Remove the Chassis Top<35>, referring to the previous step 11.
2. Remove the Tuner P. C. Board<10>, referring to the previous step 13.
3. Remove the Free Out P. C. Board<1>, referring to the previous step 14.
4. Remove the Input P. C. Board<10>, referring to the previous step 15.
5. Remove the Video P. C. Board<10>, referring to the previous step 16.
6. Disconnect the connector <CW3> from lead wire <2P> PT <29>.
7. Disconnect the connector <CW1> from AC Cord<37>.
8. Disconnect the connector <CW2> from connector <CW19> on the Standby P. C. Board<8>.
9. Disconnect the connector <CW4> from lead wire <CN708> on the Speaker P. C. Board<8>.
10. Disconnect the connector <CW5> from lead wire <CW104> on the Amp P. C. Board<1>.
11. Disconnect the connector <CW9> from lead wire <3P> P/T<29>.
12. Disconnect the connector <CW17> from lead wire <CW701> on the Front P. C. Board<10>.
13. Disconnect the connector <CW6> from lead wire <3P> P/T<29>.
14. Disconnect the connector <CW16> from lead wire <CW103> on the Amp P. C. Board<1>.
15. Disconnect the connector <CW8> from lead wire <POSISTOR> on the Radiator<20>.
16. Disconnect the connector <CW7> from lead wire <6P> P/T<29>.
17. Disconnect the connector <CW10> from connector <CN701> on the Front P. C. Board<10>.
18. Disconnect the connector <L/V PIN-01> from lead wire <1P> on the Amp P. C. Board<1>.
19. Remove 19 screws <C, K> and then remove the Chassis back <32>.
20. Remove 9 screws <C, D> and then remove the Main P. C. Board<1>.

**18 POWER TRANS<29> REMOVAL**

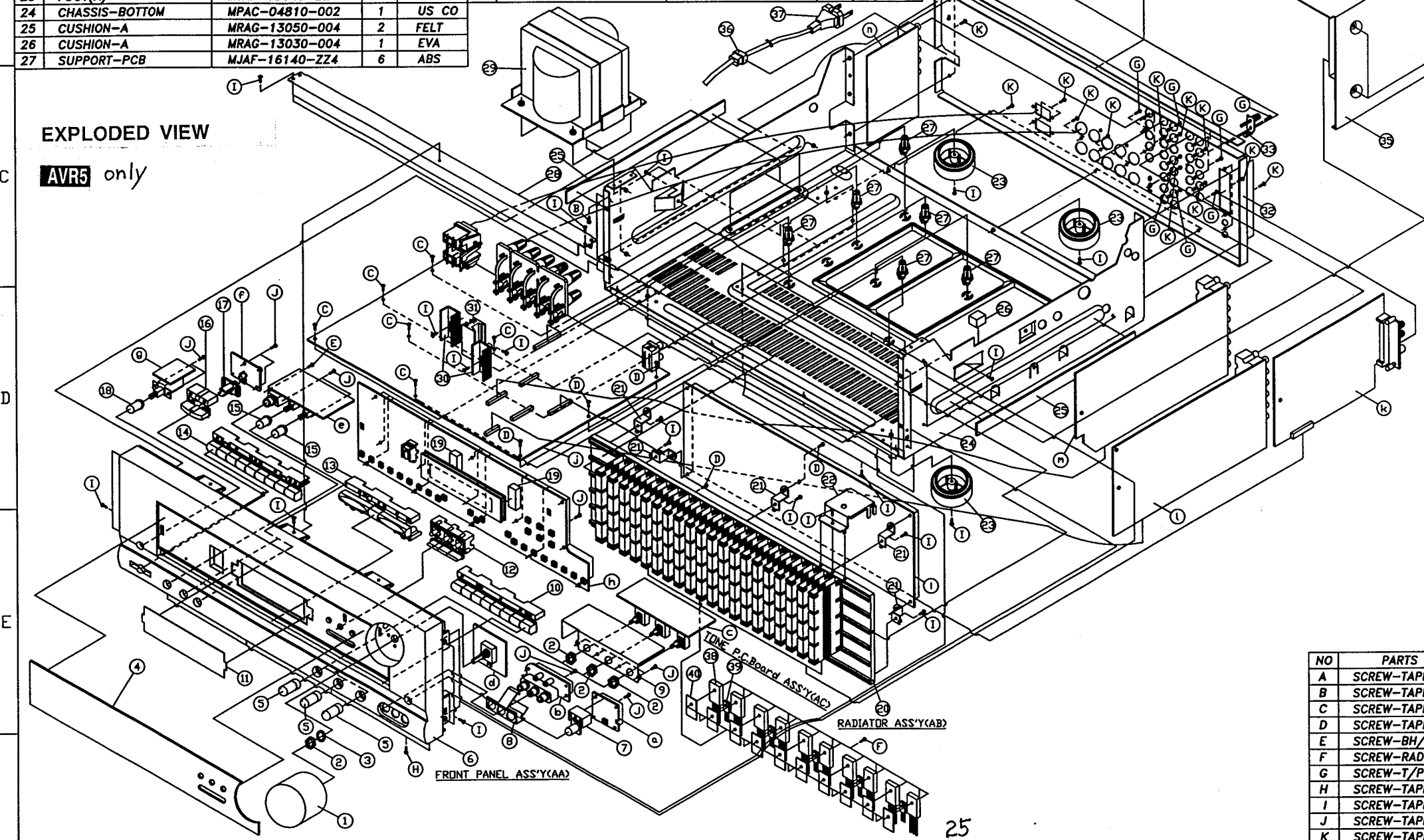
1. Remove the Chassis Top<35>, referring to the previous step 11.
2. Disconnect the lead wire <2P-black, white> from connector <CW3> on the Main P. C. Board<1>.
3. Disconnect the lead wire <3P-black, red> from connector <CW6> on the Main P. C. Board<1>.
4. Disconnect the lead wire <3P-orange, gray> from connector <CW9> on the Main P. C. Board<1>.
5. Disconnect the lead wire <6P-black, blue, brown> from connector <CW7> on the Main P. C. Board<1>.
6. Remove 4 screws <B> and then remove the Power Trans<29>.

| 1  |                     |                |      |        | 2  |                          |                |      |        | 3  |                            |         |      |        | 4  |            |         |      |        | 5 |  |  |  |  | 6 |  |  |  |  |
|----|---------------------|----------------|------|--------|----|--------------------------|----------------|------|--------|----|----------------------------|---------|------|--------|----|------------|---------|------|--------|---|--|--|--|--|---|--|--|--|--|
| NO | PARTS NAME          | PART NO        | Q'TY | REMARK | NO | PARTS NAME               | PART NO        | Q'TY | REMARK | NO | PARTS NAME                 | PART NO | Q'TY | REMARK | NO | PARTS NAME | PART NO | Q'TY | REMARK |   |  |  |  |  |   |  |  |  |  |
| 1  | KNOB-VOLUME         | MJAF-16090-ZZ4 | 1    | ABS    | 28 | CHASSIS-PANEL            | MPAC-04760-003 | 1    | US CO  | k  | TUNER P.C.BOARD            | ***     | 1    | ***    |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 2  | NUT                 | ***            | 4    | ***    | 29 | POWER-TRANS              | PTAP-03420-CJU | 1    | ***    | l  | PRE OUT P.C.BOARD          | ***     | 1    | ***    |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 3  | WASHER              | ***            | 1    | ***    | 30 | RADIATOR-TR              | MEAC-08215-004 | 2    | AL     | m  | INPUT & PROLOGIC P.C.BOARD | ***     | 1    | ***    |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 4  | WINDOW-FL           | MAAF-08070-ZZ3 | 1    | PVC    | 31 | HEAT-SINK(TR)            | MEAC-12693-004 | 1    | AL     | n  | VIDEO P.C.BOARD            | ***     | 1    | ***    |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 5  | KNOB-BALANCE        | MJAF-16070-ZZ4 | 3    | ABS    | 32 | CHASSIS-BACK             | MPAC-04770-ZZ2 | 1    | US CO  |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 6  | PANEL-FRONT         | MJAF-06080-ZZ1 | 1    | ABS    | 33 | TERMINAL-GND             | MMAC-12060-004 | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 7  | KNOB-MUTE           | MJAF-16080-ZZ4 | 1    | ABS    | 34 | CUSHION-A                | MRAG-13040-004 | 1    | FELT   |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 8  | SHIELD-VIDEO        | MPAC-16230-004 | 1    | ET-HD  | 35 | CHASSIS-TOP              | MPAC-04820-ZZ2 | 1    | VCM    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 9  | SHIELD-BALANCE      | MPAC-16160-004 | 1    | ET-HD  | 36 | CORD-BUSH                | MJAG-00280-003 | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 10 | PUSH-BUTTONS(C)     | MJAF-08030-ZZ3 | 1    | ABS    | 37 | CORD-AC A'SSY            | ACAC-00413-000 | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 11 | FILTER-FL           | MAAF-16150-ZZ4 | 1    | PVC    | 38 | T/R                      | ***            | 10   | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 12 | KNOB-CHANNEL        | MJAF-08000-ZZ3 | 1    | ABS    | 39 | T/R                      | ***            | 5    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 13 | PUSH-BUTTONS(B)     | MJAF-08020-ZZ3 | 1    | ABS    | 40 | MICA                     | ***            | 10   | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 14 | PUSH-BUTTONS(A)     | MJAF-08010-ZZ3 | 1    | ABS    | a  | MUTE P.C.BOARD           | ***            | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 15 | KNOB-SPEAKER        | MJAF-16060-ZZ4 | 2    | ABS    | b  | VIDEO3 P.C.BOARD         | ***            | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 16 | KNOB-POWER          | MJAF-16110-ZZ4 | 1    | ABS    | c  | ZONE P.C.BOARD           | ***            | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 17 | LENS-POWER          | MAAF-16120-ZZ4 | 1    | ACRYL  | d  | ENCODER VOLUME P.C.BOARD | ***            | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 18 | KNOB-STANDBY        | MJAF-16050-ZZ4 | 1    | ABS    | e  | SPEAKER P.C.BOARD        | ***            | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 19 | CUSHION-A           | MRAG-13020-004 | 2    | EVA    | f  | POWER P.C.BOARD          | ***            | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 20 | RADIATOR-MAIN       | MEAC-04840-002 | 1    | A6063  | g  | STANDBY P.C.BOARD        | ***            | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 21 | BRACKET-RADIATOR(S) | MPAC-16220-004 | 5    | SECC   | h  | FRONT P.C.BOARD          | ***            | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 22 | BRACKET-PCB         | MPAC-16170-004 | 1    | US CO  | i  | AMP P.C.BOARD            | ***            | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 23 | FOOT(A)             | MJAF-15640-ZZ4 | 4    | ABS    | j  | MAIN P.C.BOARD           | ***            | 1    | ***    |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 24 | CHASSIS-BOTTOM      | MPAC-04810-002 | 1    | US CO  |    |                          |                |      |        |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 25 | CUSHION-A           | MRAG-13050-004 | 2    | FELT   |    |                          |                |      |        |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 26 | CUSHION-A           | MRAG-13030-004 | 1    | EVA    |    |                          |                |      |        |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |
| 27 | SUPPORT-PCB         | MJAF-16140-ZZ4 | 6    | ABS    |    |                          |                |      |        |    |                            |         |      |        |    |            |         |      |        |   |  |  |  |  |   |  |  |  |  |

AVR5/AVR18RDS

# EXPLODED VIEW

AVR5 only

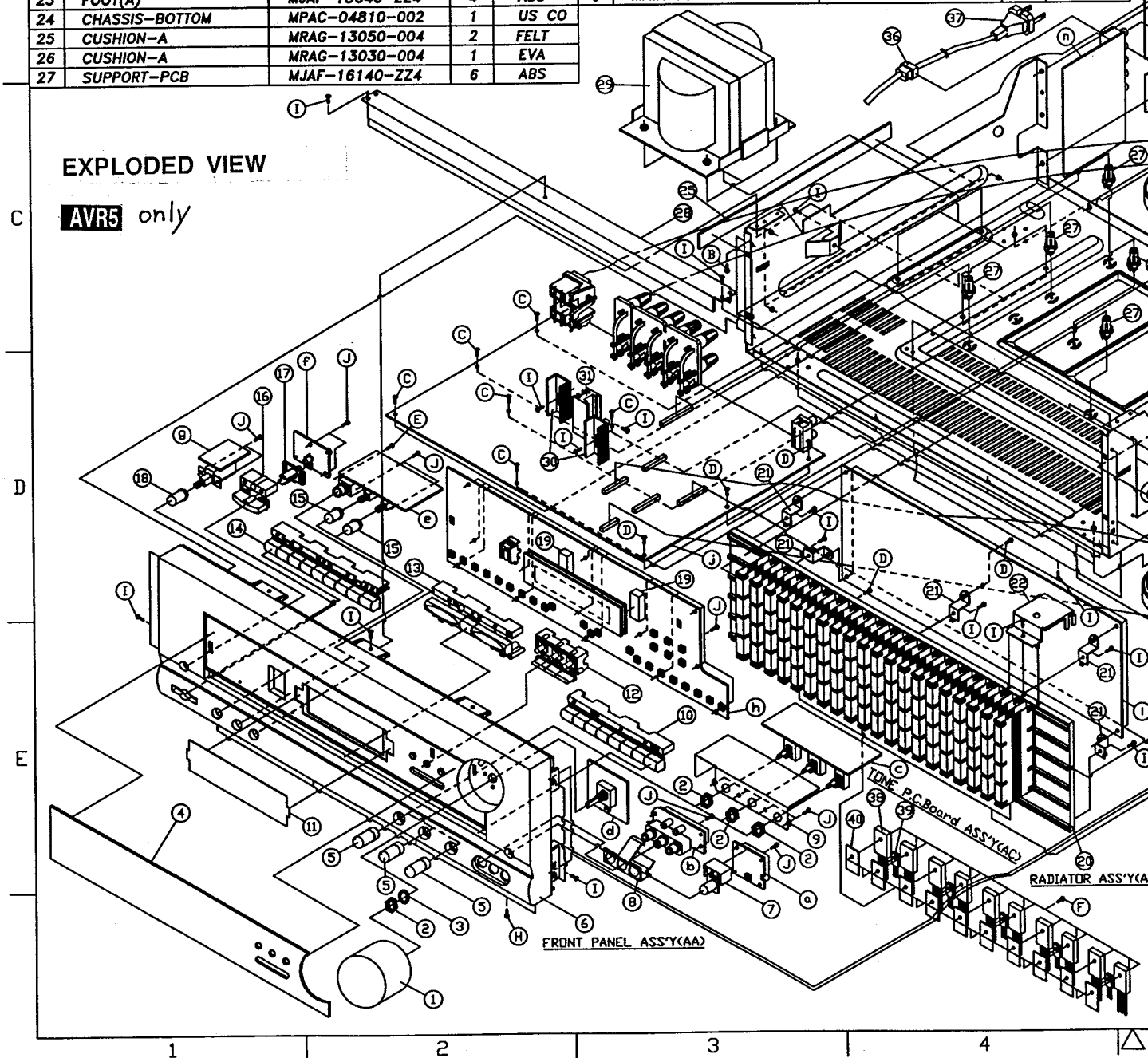


| NO | PARTS NAME      | PART NO        | Q'TY | REMARK |
|----|-----------------|----------------|------|--------|
| A  | SCREW-TAPPING   | XSTB-40080-ZB8 | 6    | ***    |
| B  | SCREW-TAPPING   | XSTB-40080-ZY8 | 4    | ***    |
| C  | SCREW-TAPPING   | XSTS-30180-ZY4 | 6    | ***    |
| D  | SCREW-TAPPING   | XSTS-30080-ZY4 | 9    | ***    |
| E  | SCREW-BH/W      | MMTC-12180-004 | 1    | ***    |
| F  | SCREW-RADIATOR  | MMAC-15650-004 | 15   | ***    |
| G  | SCREW-T/P-TOOTH | MMAC-03592-004 | 8    | ***    |
| H  | SCREW-TAPPING   | XSTB-30080-ZB4 | 7    | ***    |
| I  | SCREW-TAPPING   | XSTB-30080-ZY4 | 26   | ***    |
| J  | SCREW-TAPPING   | XSTB-30100-ZY4 | 27   | ***    |
| K  | SCREW-TAPPING   | XSTB-30100-ZB4 | 20   | ***    |

| 1  |                     |                |      |        | 2  |               |                |      |        | 3  |                   |                |      |        | 4  |                          |                |      |        |    |
|----|---------------------|----------------|------|--------|----|---------------|----------------|------|--------|----|-------------------|----------------|------|--------|----|--------------------------|----------------|------|--------|----|
| NO | PARTS NAME          | PART NO        | Q'TY | REMARK | NO | PARTS NAME    | PART NO        | Q'TY | REMARK | NO | PARTS NAME        | PART NO        | Q'TY | REMARK | NO | PARTS NAME               | PART NO        | Q'TY | REMARK | NO |
| 1  | KNOB-VOLUME         | MJAF-16090-ZZ4 | 1    | ABS    | 28 | CHASSIS-PANEL | MPAC-04760-003 | 1    | US CO  | 29 | POWER-TRANS       | PTAP-03420-CJU | 1    | ***    | 30 | RADIATOR-TR              | MEAC-08215-004 | 2    | AL     |    |
| 2  | NUT                 | ***            | 4    | ***    | 31 | HEAT-SINK(TR) | MEAC-12693-004 | 1    | AL     | 32 | CHASSIS-BACK      | MPAC-04770-ZZ2 | 1    | US CO  | 33 | TERMINAL-GND             | MMAC-12060-004 | 1    | ***    |    |
| 3  | WASHER              | ***            | 1    | ***    | 34 | CUSHION-A     | MRAG-13040-004 | 1    | FELT   | 35 | CHASSIS-TOP       | MPAC-04820-ZZ2 | 1    | VCM    | 36 | CORD-BUSH                | MJAG-00280-003 | 1    | ***    |    |
| 4  | WINDOW-FL           | MAAF-08070-ZZ3 | 1    | PVC    | 37 | CORD-AC A'SSY | ACAC-00413-000 | 1    | ***    | 38 | T/R               | ***            | 10   | ***    | 39 | T/R                      | ***            | 5    | ***    |    |
| 5  | KNOB-BALANCE        | MJAF-16070-ZZ4 | 3    | ABS    | 40 | MICA          | ***            | 10   | ***    | a  | MUTE P.C.BOARD    | ***            | 1    | ***    | b  | VIDEO3 P.C.BOARD         | ***            | 1    | ***    |    |
| 6  | PANEL-FRONT         | MJAF-06080-ZZ1 | 1    | ABS    |    |               |                |      |        | c  | TOPE P.C.BOARD    | ***            | 1    | ***    | d  | ENCODER VOLUME P.C.BOARD | ***            | 1    | ***    |    |
| 7  | KNOB-MUTE           | MJAF-16080-ZZ4 | 1    | ABS    |    |               |                |      |        | e  | SPEAKER P.C.BOARD | ***            | 1    | ***    | f  | POWER P.C.BOARD          | ***            | 1    | ***    |    |
| 8  | SHIELD-VIDEO        | MPAC-16230-004 | 1    | ET-HD  |    |               |                |      |        | g  | STANDBY P.C.BOARD | ***            | 1    | ***    | h  | FRONT P.C.BOARD          | ***            | 1    | ***    |    |
| 9  | SHIELD-BALANCE      | MPAC-16160-004 | 1    | ET-HD  |    |               |                |      |        | i  | AMP P.C.BOARD     | ***            | 1    | ***    | j  | MAIN P.C.BOARD           | ***            | 1    | ***    |    |
| 10 | PUSH-BUTTONS(C)     | MJAF-08030-ZZ3 | 1    | ABS    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 11 | FILTER-FL           | MAAF-16150-ZZ4 | 1    | PVC    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 12 | KNOB-CHANNEL        | MJAF-08000-ZZ3 | 1    | ABS    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 13 | PUSH-BUTTONS(B)     | MJAF-08020-ZZ3 | 1    | ABS    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 14 | PUSH-BUTTONS(A)     | MJAF-08010-ZZ3 | 1    | ABS    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 15 | KNOB-SPEAKER        | MJAF-16060-ZZ4 | 2    | ABS    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 16 | KNOB-POWER          | MJAF-16110-ZZ4 | 1    | ABS    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 17 | LENS-POWER          | MAAF-16120-ZZ4 | 1    | ACRYL  |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 18 | KNOB-STANDBY        | MJAF-16050-ZZ4 | 1    | ABS    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 19 | CUSHION-A           | MRAG-13020-004 | 2    | EVA    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 20 | RADIATOR-MAIN       | MEAC-04840-002 | 1    | A6063  |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 21 | BRACKET-RADIATOR(S) | MPAC-16220-004 | 5    | SECC   |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 22 | BRACKET-PCB         | MPAC-16170-004 | 1    | US CO  |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 23 | FOOT(A)             | MJAF-15640-ZZ4 | 4    | ABS    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 24 | CHASSIS-BOTTOM      | MPAC-04810-002 | 1    | US CO  |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 25 | CUSHION-A           | MRAG-13050-004 | 2    | FELT   |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 26 | CUSHION-A           | MRAG-13030-004 | 1    | EVA    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |
| 27 | SUPPORT-PCB         | MJAF-16140-ZZ4 | 6    | ABS    |    |               |                |      |        |    |                   |                |      |        |    |                          |                |      |        |    |

## EXPLODED VIEW

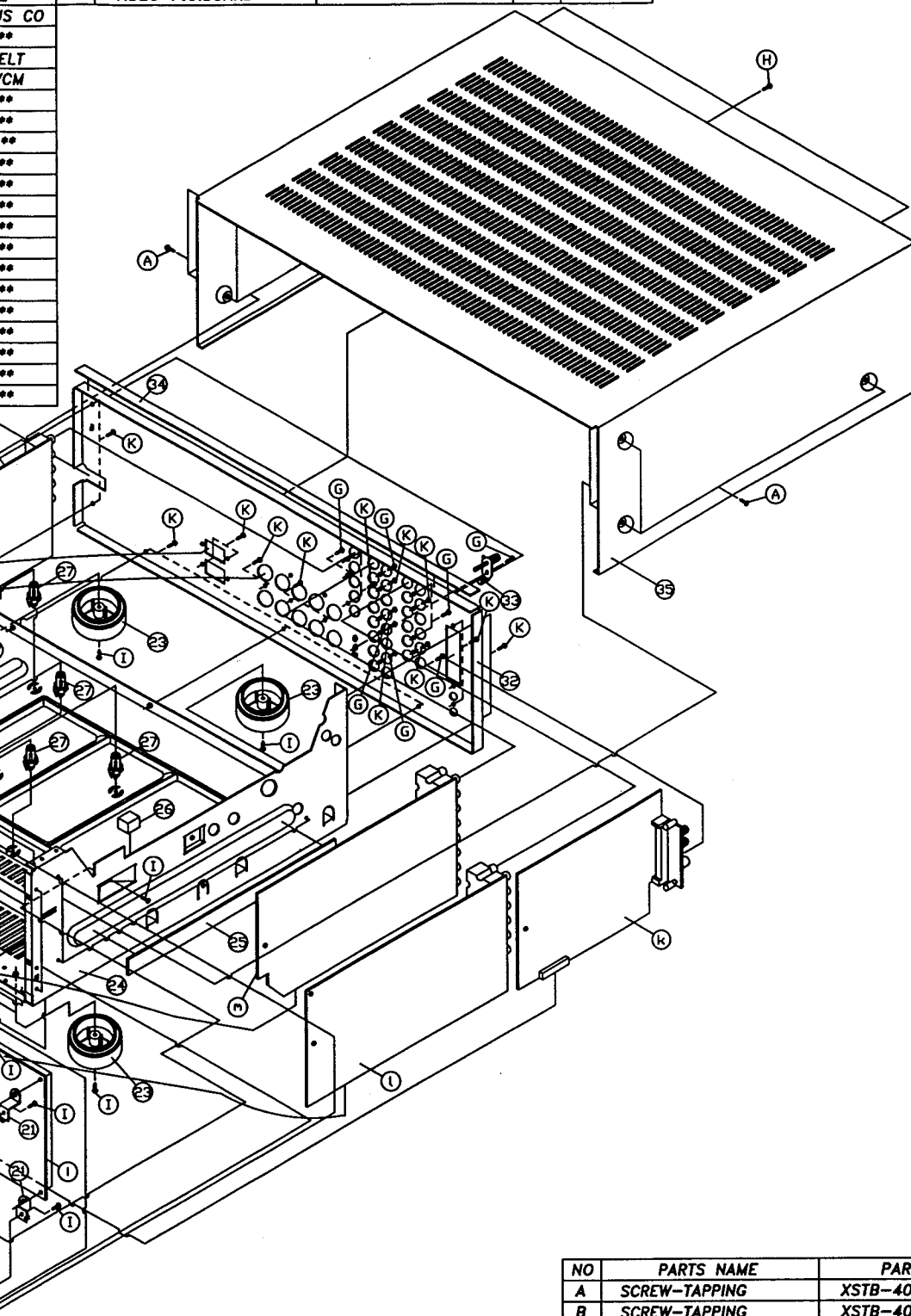
**AVR5** only





| MARK | NO | PARTS NAME                 | PART NO | Q'TY | REMARK |
|------|----|----------------------------|---------|------|--------|
| S CO | k  | TUNER P.C.BOARD            | ***     | 1    | ***    |
| ***  | l  | PRE OUT P.C.BOARD          | ***     | 1    | ***    |
| L    | m  | INPUT & PROLOGIC P.C.BOARD | ***     | 1    | ***    |
| L    | n  | VIDEO P.C.BOARD            | ***     | 1    | ***    |

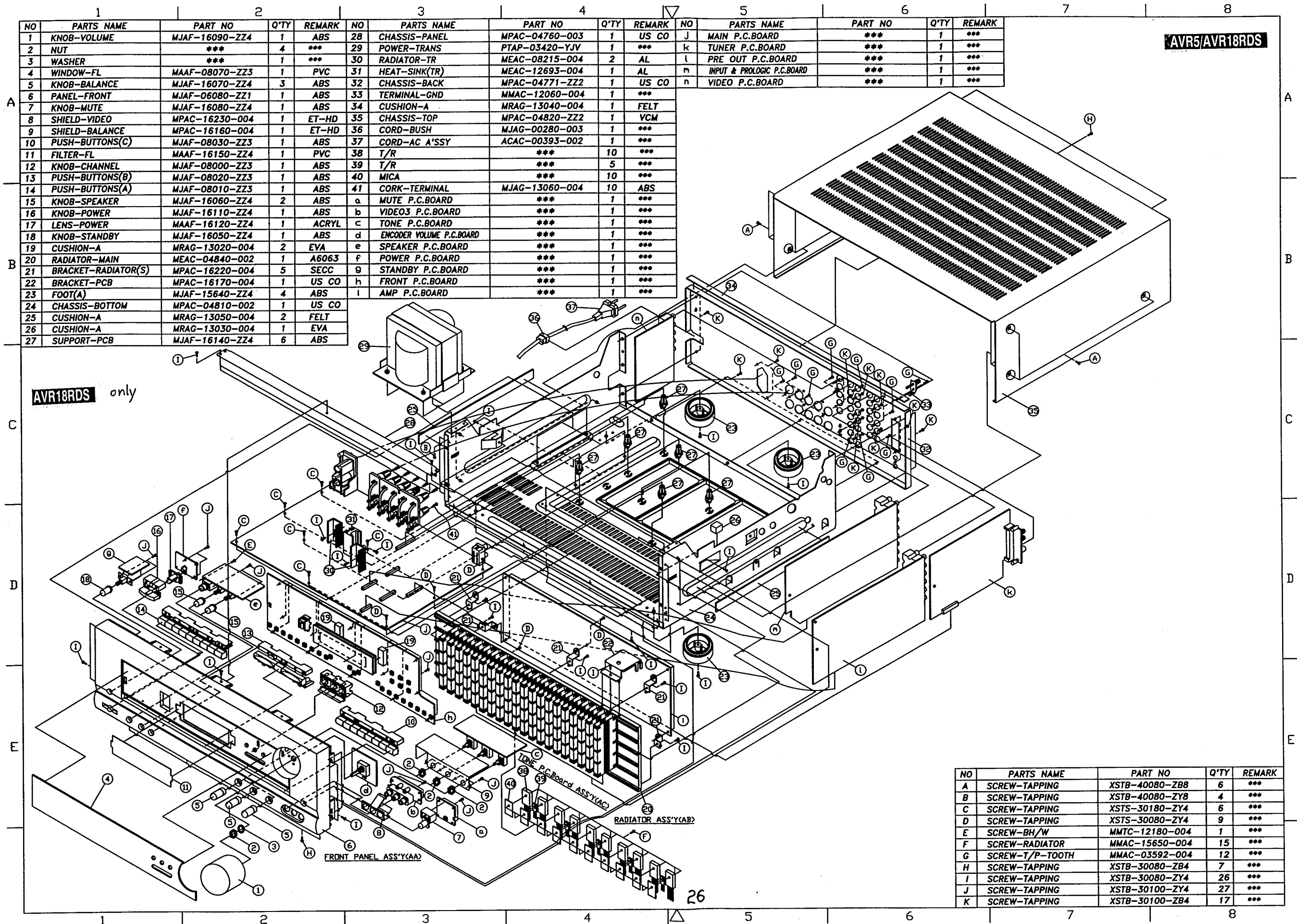
AVR5/AVR18RDS



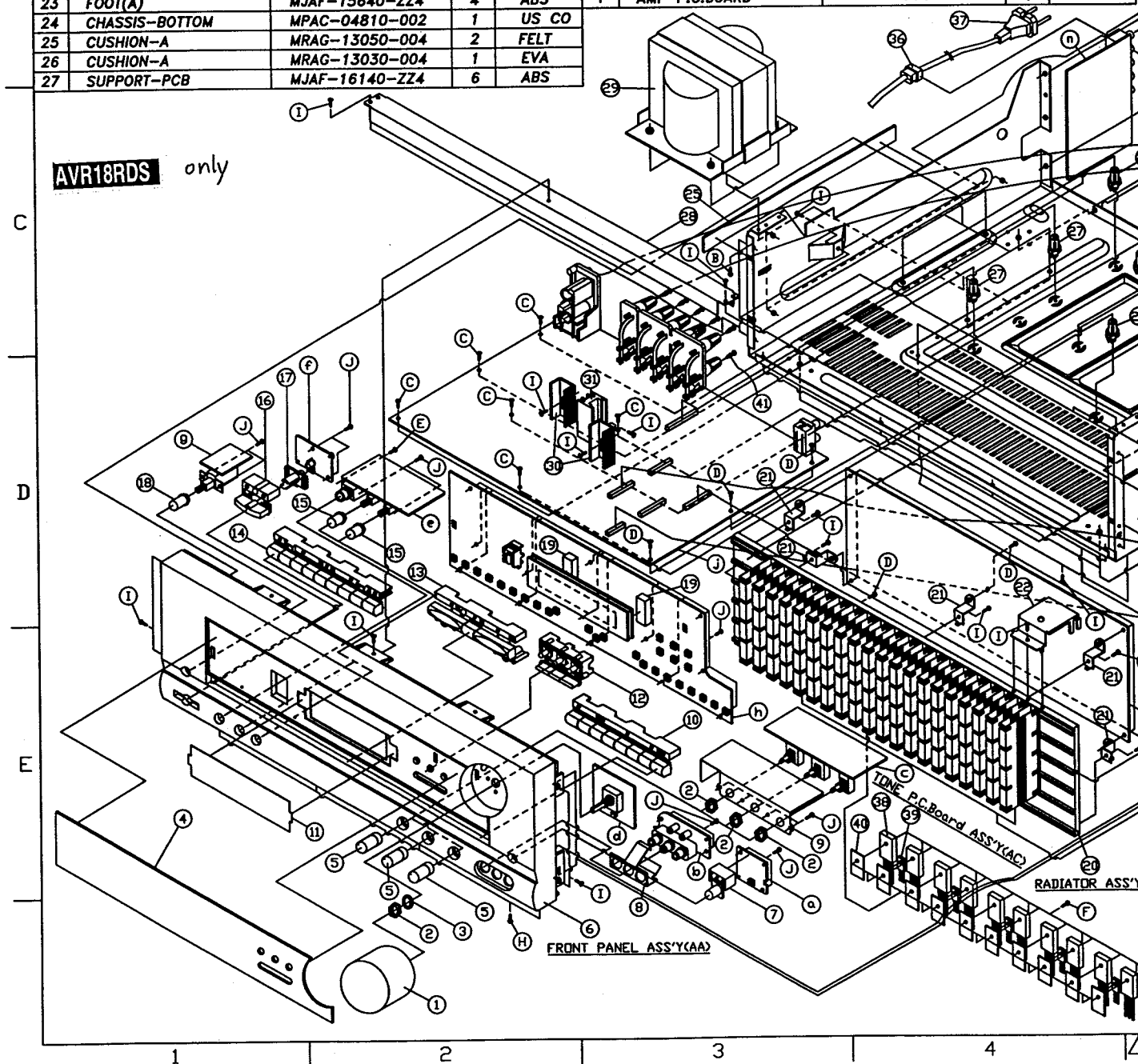
| NO | PARTS NAME      | PART NO        | Q'TY | REMARK |
|----|-----------------|----------------|------|--------|
| A  | SCREW-TAPPING   | XSTB-40080-ZB8 | 6    | ***    |
| B  | SCREW-TAPPING   | XSTB-40080-ZY8 | 4    | ***    |
| C  | SCREW-TAPPING   | XSTS-30180-ZY4 | 6    | ***    |
| D  | SCREW-TAPPING   | XSTS-30080-ZY4 | 9    | ***    |
| E  | SCREW-BH/W      | MMTC-12180-004 | 1    | ***    |
| F  | SCREW-RADIATOR  | MMAC-15650-004 | 15   | ***    |
| G  | SCREW-T/P-TOOTH | MMAC-03592-004 | 8    | ***    |
| H  | SCREW-TAPPING   | XSTB-30080-ZB4 | 7    | ***    |
| I  | SCREW-TAPPING   | XSTB-30080-ZY4 | 26   | ***    |
| J  | SCREW-TAPPING   | XSTB-30100-ZY4 | 27   | ***    |
| K  | SCREW-TAPPING   | XSTB-30100-ZB4 | 20   | ***    |

20  
OR ASS'Y(AB)

25

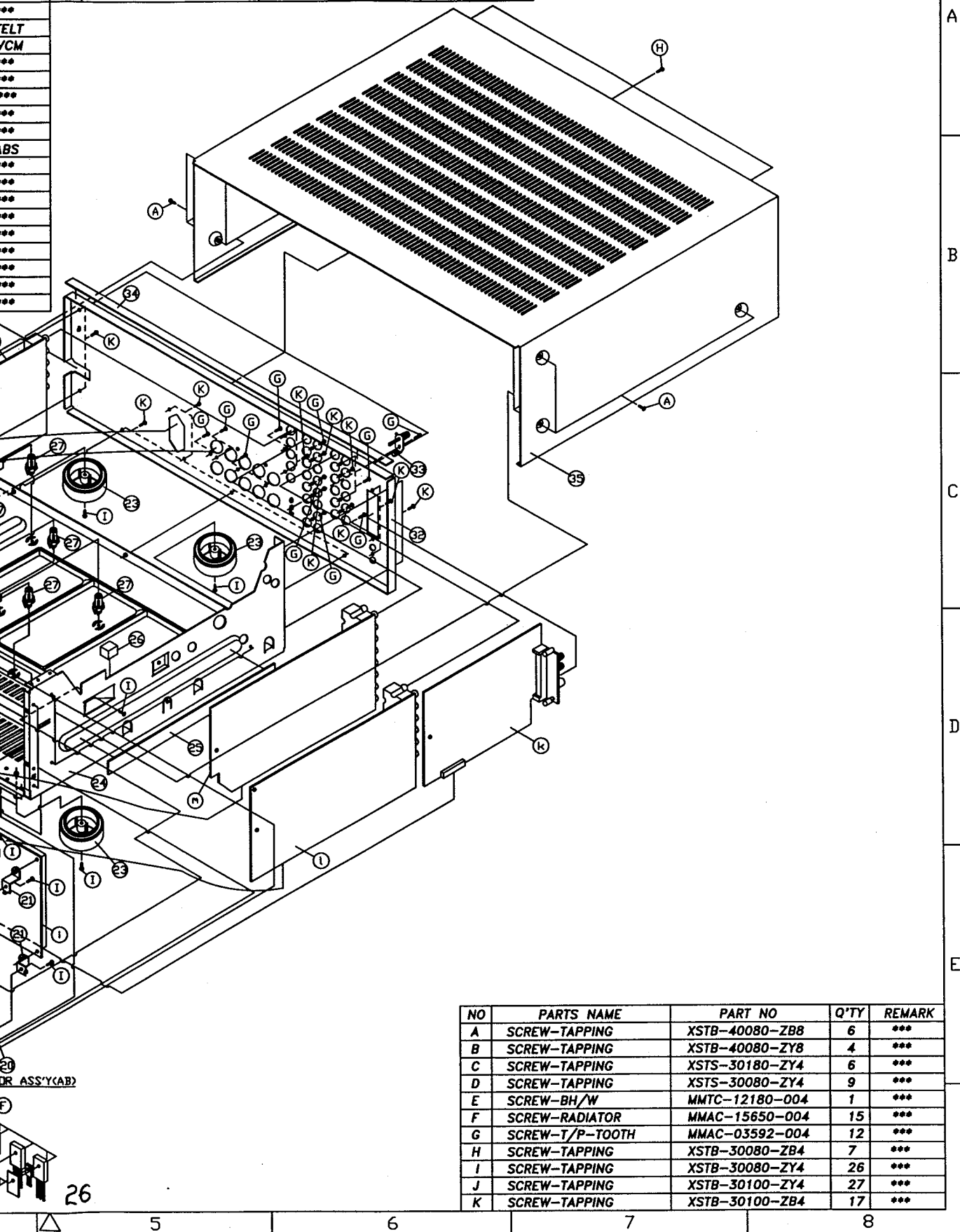


| 1  |                     |                |      |        | 2  |               |                |      |        | 3  |                          |                |      |        | 4  |                   |                |      |        |
|----|---------------------|----------------|------|--------|----|---------------|----------------|------|--------|----|--------------------------|----------------|------|--------|----|-------------------|----------------|------|--------|
| NO | PARTS NAME          | PART NO        | Q'TY | REMARK | NO | PARTS NAME    | PART NO        | Q'TY | REMARK | NO | PARTS NAME               | PART NO        | Q'TY | REMARK | NO | PARTS NAME        | PART NO        | Q'TY | REMARK |
| 1  | KNOB-VOLUME         | MJAF-16090-ZZ4 | 1    | ABS    | 28 | CHASSIS-PANEL | MPAC-04760-003 | 1    | US CO  | 29 | POWER-TRANS              | PTAP-03420-YJV | 1    | ***    | 30 | RADIATOR-TR       | MEAC-08215-004 | 2    | AL     |
| 2  | NUT                 | ***            | 4    | ***    | 31 | HEAT-SINK(TR) | MEAC-12693-004 | 1    | AL     | 32 | CHASSIS-BACK             | MPAC-04771-ZZ2 | 1    | US CO  | 33 | TERMINAL-GND      | MMAC-12060-004 | 1    | ***    |
| 3  | WASHER              | ***            | 1    | ***    | 34 | CUSHION-A     | MRAG-13040-004 | 1    | FELT   | 35 | CHASSIS-TOP              | MPAC-04820-ZZ2 | 1    | VCM    | 36 | CORD-BUSH         | MJAG-00280-003 | 1    | ***    |
| 4  | WINDOW-FL           | MAAF-08070-ZZ3 | 1    | PVC    | 37 | CORD-AC A'SSY | ACAC-00393-002 | 1    | ***    | 38 | T/R                      | ***            | 10   | ***    | 39 | T/R               | ***            | 5    | ***    |
| 5  | KNOB-BALANCE        | MJAF-16070-ZZ4 | 3    | ABS    | 40 | MICA          | ***            | 10   | ***    | 41 | CORK-TERMINAL            | MJAG-13060-004 | 10   | ABS    | a  | MUTE P.C.BOARD    | ***            | 1    | ***    |
| 6  | PANEL-FRONT         | MJAF-06080-ZZ1 | 1    | ABS    |    |               |                |      |        | b  | VIDEO3 P.C.BOARD         | ***            | 1    | ***    | c  | tone P.C.BOARD    | ***            | 1    | ***    |
| 7  | KNOB-MUTE           | MJAF-16080-ZZ4 | 1    | ABS    |    |               |                |      |        | d  | ENCODER VOLUME P.C.BOARD | ***            | 1    | ***    | e  | SPEAKER P.C.BOARD | ***            | 1    | ***    |
| 8  | SHIELD-VIDEO        | MPAC-16230-004 | 1    | ET-HD  |    |               |                |      |        | f  | POWER P.C.BOARD          | ***            | 1    | ***    | g  | STANDBY P.C.BOARD | ***            | 1    | ***    |
| 9  | SHIELD-BALANCE      | MPAC-16160-004 | 1    | ET-HD  |    |               |                |      |        | h  | FRONT P.C.BOARD          | ***            | 1    | ***    | i  | AMP P.C.BOARD     | ***            | 1    | ***    |
| 10 | PUSH-BUTTONS(C)     | MJAF-08030-ZZ3 | 1    | ABS    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 11 | FILTER-FL           | MAAF-16150-ZZ4 | 1    | PVC    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 12 | KNOB-CHANNEL        | MJAF-08000-ZZ3 | 1    | ABS    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 13 | PUSH-BUTTONS(B)     | MJAF-08020-ZZ3 | 1    | ABS    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 14 | PUSH-BUTTONS(A)     | MJAF-08010-ZZ3 | 1    | ABS    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 15 | KNOB-SPEAKER        | MJAF-16060-ZZ4 | 2    | ABS    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 16 | KNOB-POWER          | MJAF-16110-ZZ4 | 1    | ABS    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 17 | LENS-POWER          | MAAF-16120-ZZ4 | 1    | ACRYL  |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 18 | KNOB-STANDBY        | MJAF-16050-ZZ4 | 1    | ABS    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 19 | CUSHION-A           | MRAG-13020-004 | 2    | EVA    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 20 | RADIATOR-MAIN       | MEAC-04840-002 | 1    | A6063  |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 21 | BRACKET-RADIATOR(S) | MPAC-16220-004 | 5    | SECC   |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 22 | BRACKET-PCB         | MPAC-16170-004 | 1    | US CO  |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 23 | FOOT(A)             | MJAF-15640-ZZ4 | 4    | ABS    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 24 | CHASSIS-BOTTOM      | MPAC-04810-002 | 1    | US CO  |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 25 | CUSHION-A           | MRAG-13050-004 | 2    | FELT   |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 26 | CUSHION-A           | MRAG-13030-004 | 1    | EVA    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |
| 27 | SUPPORT-PCB         | MJAF-16140-ZZ4 | 6    | ABS    |    |               |                |      |        |    |                          |                |      |        |    |                   |                |      |        |



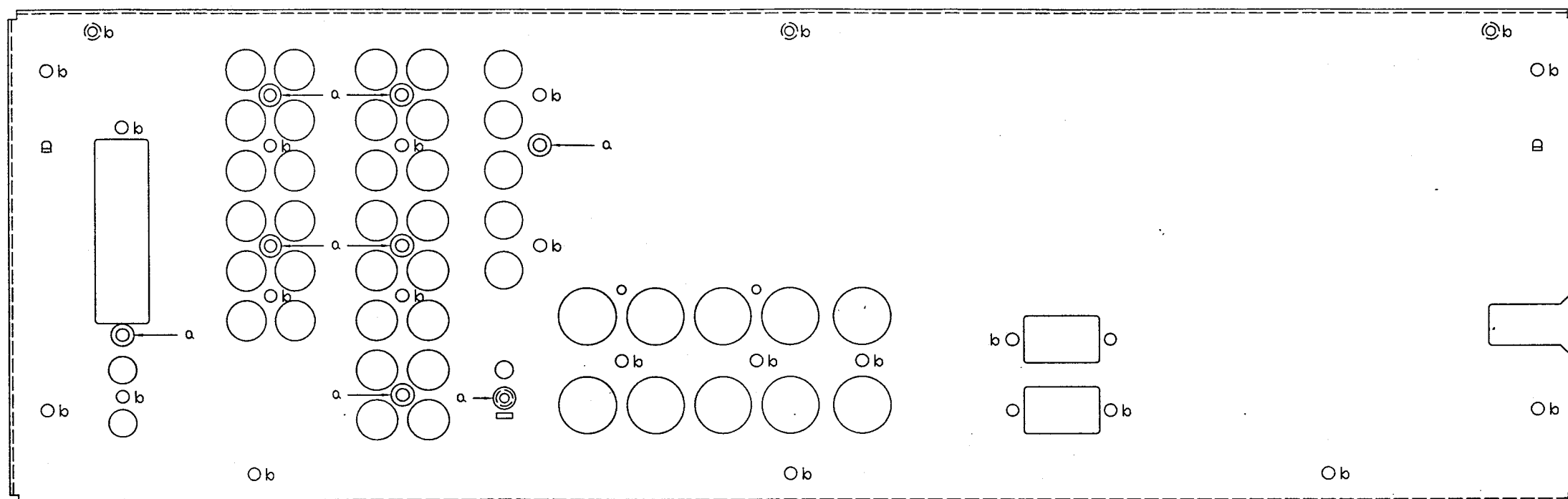
| REMARK | NO | PARTS NAME                 | PART NO | Q'TY | REMARK |
|--------|----|----------------------------|---------|------|--------|
| US CO  | J  | MAIN P.C.BOARD             | ***     | 1    | ***    |
| ***    | k  | TUNER P.C.BOARD            | ***     | 1    | ***    |
| AL     | l  | PRE OUT P.C.BOARD          | ***     | 1    | ***    |
| L      | m  | INPUT & PROLOGIC P.C.BOARD | ***     | 1    | ***    |
| US CO  | n  | VIDEO P.C.BOARD            | ***     | 1    | ***    |

AVR5/AVR18RDS



| NO | PARTS NAME      | PART NO        | Q'TY | REMARK |
|----|-----------------|----------------|------|--------|
| A  | SCREW-TAPPING   | XSTB-40080-ZB8 | 6    | ***    |
| B  | SCREW-TAPPING   | XSTB-40080-ZY8 | 4    | ***    |
| C  | SCREW-TAPPING   | XSTS-30180-ZY4 | 6    | ***    |
| D  | SCREW-TAPPING   | XSTS-30080-ZY4 | 9    | ***    |
| E  | SCREW-BH/W      | MMTC-12180-004 | 1    | ***    |
| F  | SCREW-RADIATOR  | MMAC-15650-004 | 15   | ***    |
| G  | SCREW-T/P-TOOTH | MMAC-03592-004 | 12   | ***    |
| H  | SCREW-TAPPING   | XSTB-30080-ZB4 | 7    | ***    |
| I  | SCREW-TAPPING   | XSTB-30080-ZY4 | 26   | ***    |
| J  | SCREW-TAPPING   | XSTB-30100-ZY4 | 27   | ***    |
| K  | SCREW-TAPPING   | XSTB-30100-ZB4 | 17   | ***    |

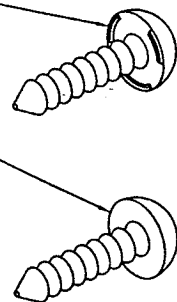
# \* AVR 5 / AVR18RDS PRINCIPAL SCREW LOCATION



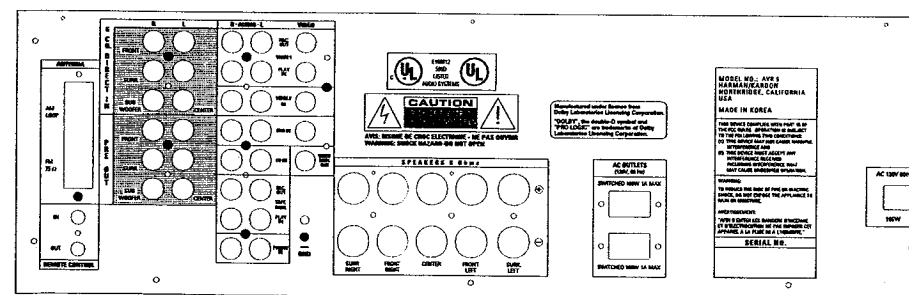
- \* a POINT(8) : MMAC-03592-004 SCREW-T/P-TOOTH(FOR GROUNDING)
- \* b POINT(23) : XSTB-30100-ZB4 SCREW-TAPPING

MMAC-03592-004 SCREW-T/P-TOOTH

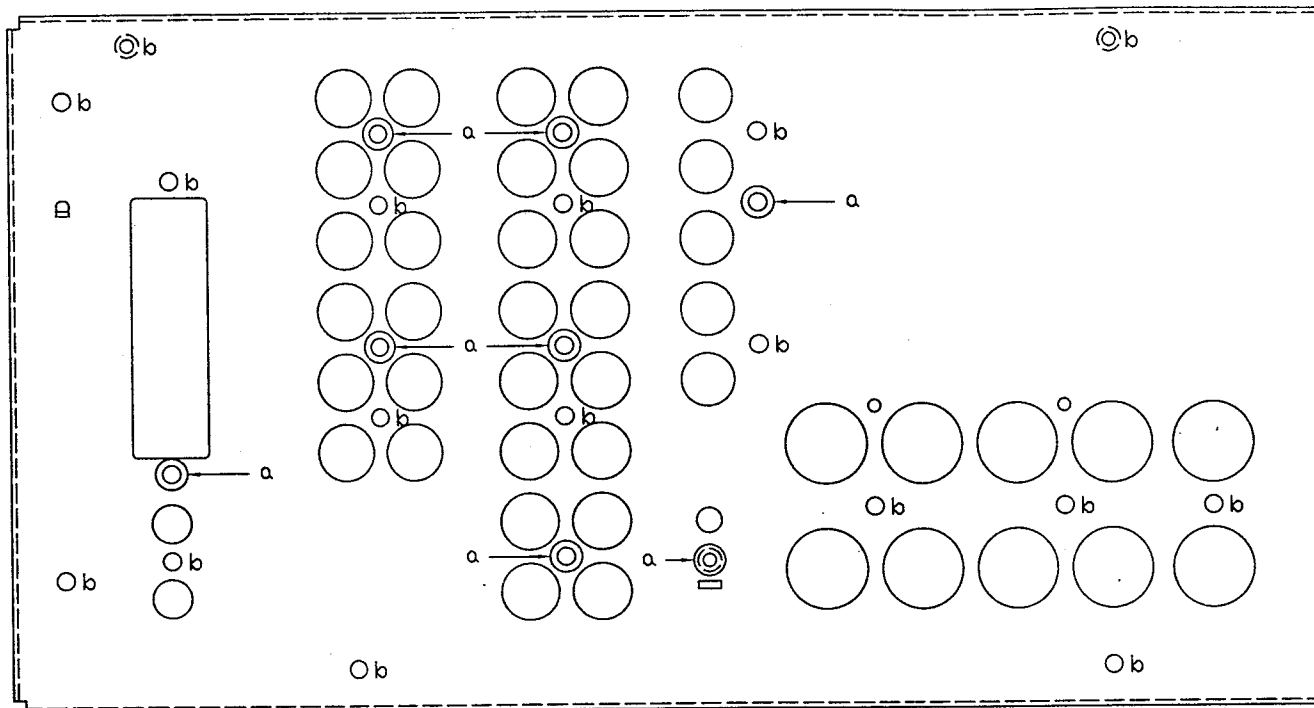
XSTB-30100-ZB4 SCREW-TAPPING



## ● GROUND POSITION



# \* AVR 5 / AVR18RDS PRINCIPAL SCREW LOCATION

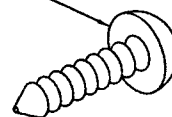
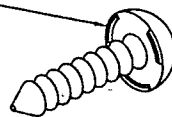


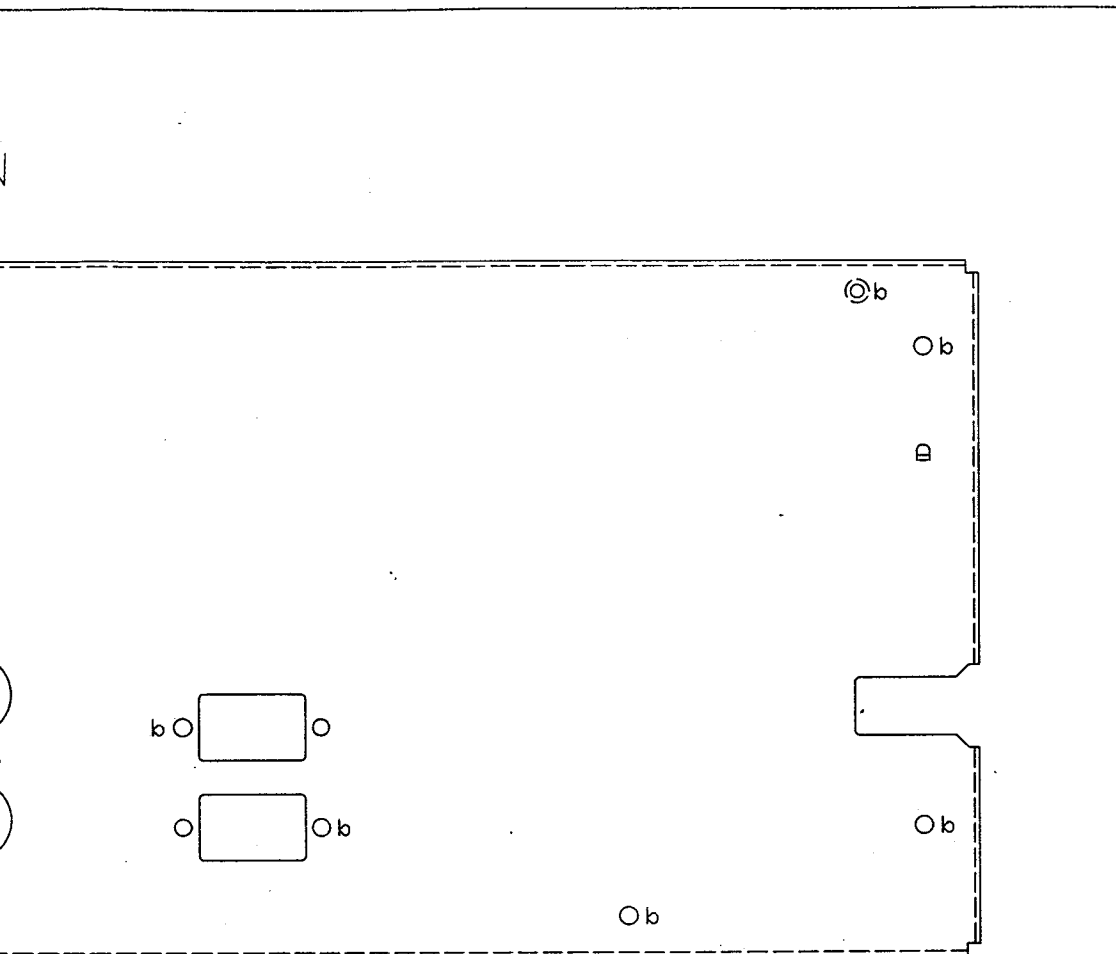
\* a POINT(8) : MMAC-03592-004 SCREW-T/P-TOOTH(FOR GROUNDING)

\* b POINT(23) : XSTB-30100-ZB4 SCREW-TAPPING

MMAC-03592-004 SCREW-T/P-TOOTH

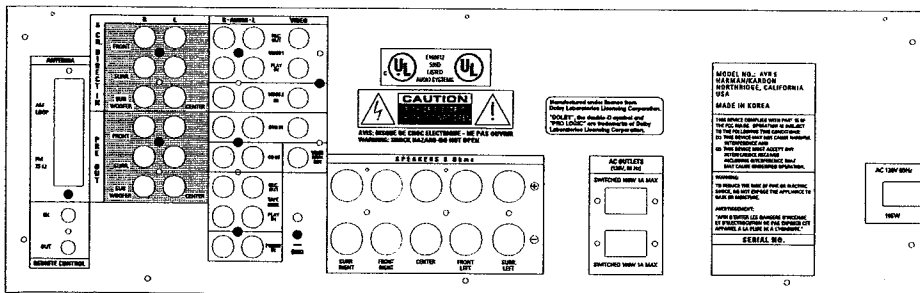
XSTB-30100-ZB4 SCREW-TAPPING



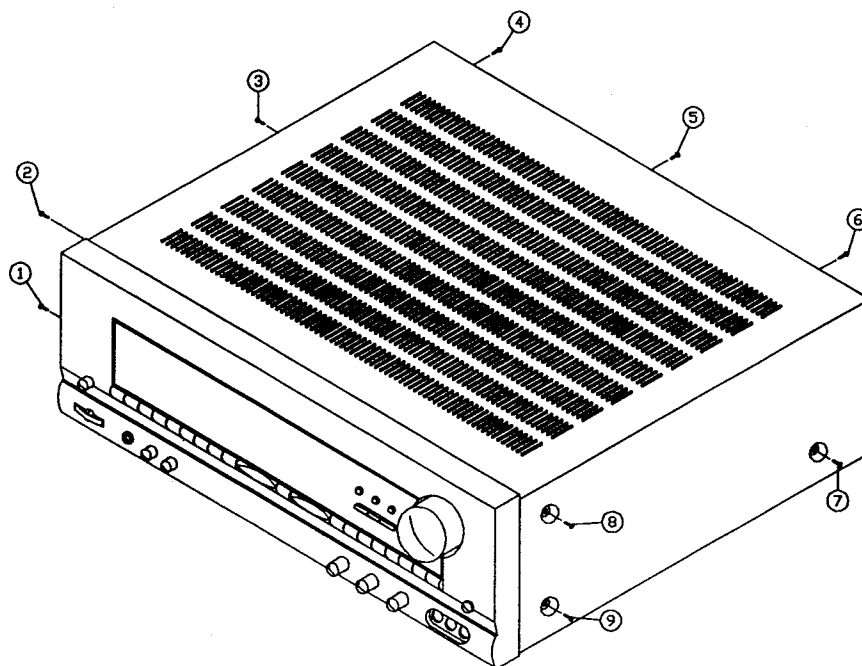


ING)

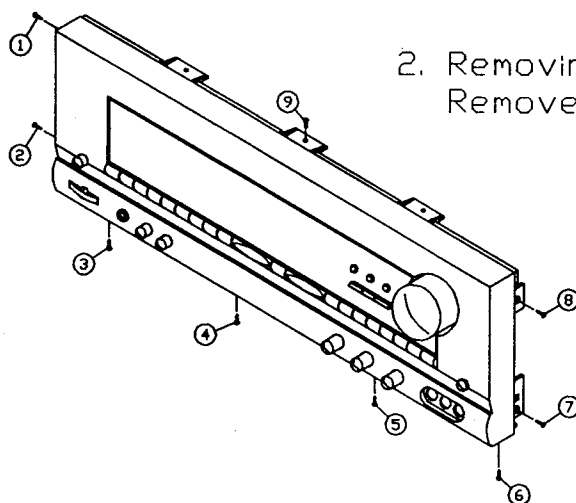
● GROUND POSITION



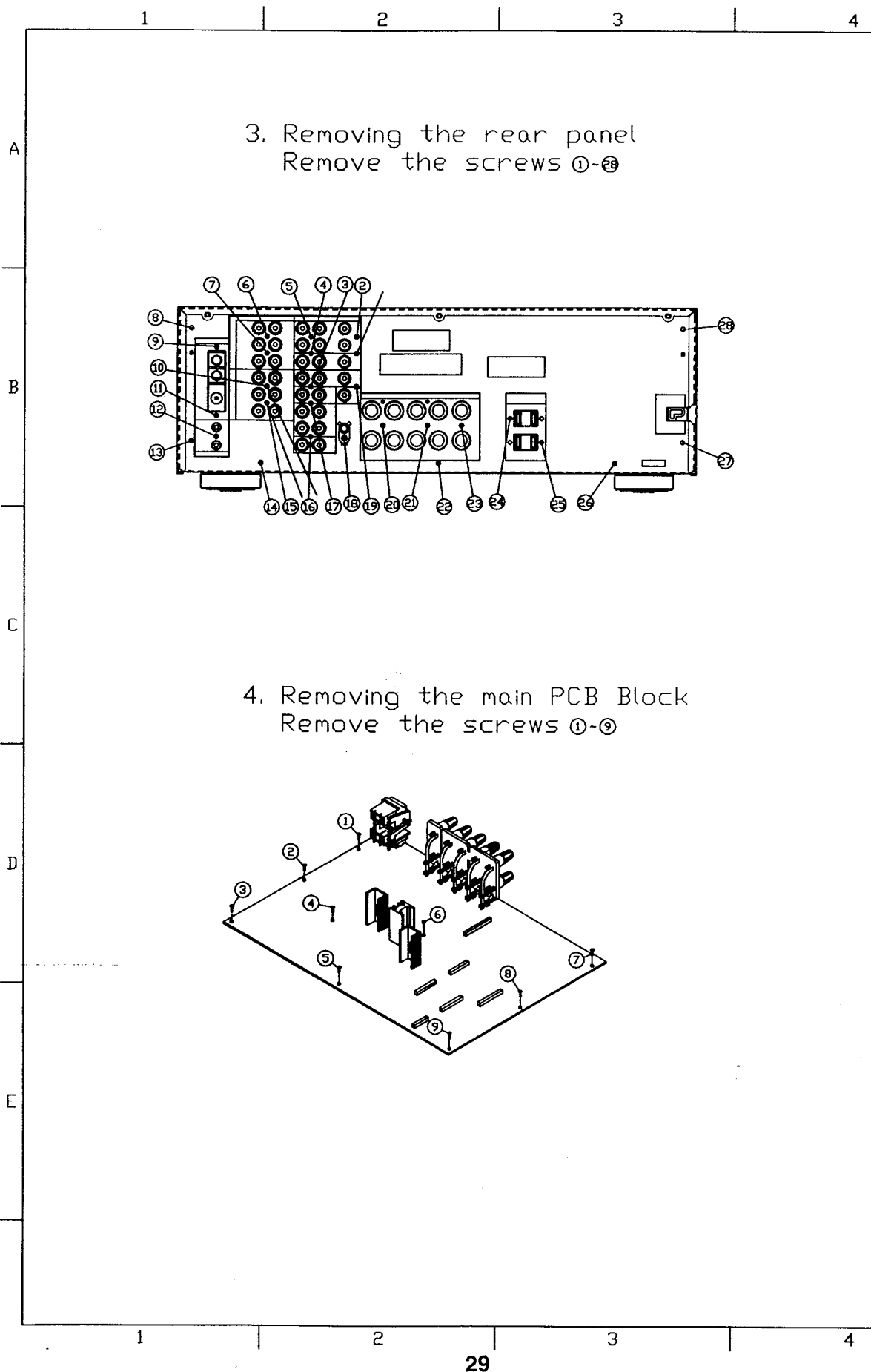
1. Removing the Chassis Top  
Remove the screws ①-⑨



2. Removing the Front Panel  
Remove the screws ①-⑨







## MECHANICAL PARTS LIST

| Ref. No. | Part No.       | Description         |                                    |
|----------|----------------|---------------------|------------------------------------|
|          | 1.BLOCK MECHA  |                     |                                    |
| 1        | MJAF-16090-ZZ4 | KNOB-VOLUME         | ABS-720                            |
| 4        | MAAF-08070-ZZ3 | WINDOW-FL           | PVC, A700D R(a)                    |
| 5        | MJAF-16070-ZZ4 | KNOB-BALANCE        | ABS-720                            |
| 6        | MJAF-16110-ZZ4 | KNOB-POWER          | ABS-720                            |
| 6        | MJAF-06080-ZZ1 | PANEL-FRONT         | ABS-720                            |
| 7        | MJAF-16080-ZZ4 | KNOB-MUTE           | ABS-720                            |
| 8        | MPAC-16230-004 | SHIELD-VIDEO        | ET-HD,0.3T                         |
| 9        | MPAC-16160-004 | SHIELD-BALANCE      | ET-HD t0.5                         |
| 10       | MJAF-08030-ZZ3 | PUSH-BUTTONS(C)     | ABS-720                            |
| 11       | MAAF-16150-ZZ4 | FILTER-FL           | PVC, RSM-05                        |
| 12       | MJAF-08000-ZZ3 | KNOB-CHANNEL        | ABS-720                            |
| 13       | MJAF-08020-ZZ3 | PUSH-BUTTONS(B)     | ABS-720                            |
| 14       | MJAF-08010-ZZ3 | PUSH-BUTTONS(A)     | ABS-720                            |
| 15       | MJAF-16060-ZZ4 | KNOB-SPEAKER        | ABS-720                            |
| 17       | MAAF-16120-ZZ4 | LENS-POWER          | PMMA(IF-850)                       |
| 18       | MJAF-16050-ZZ4 | KNOB-STANDBY        | ABS-720                            |
| 20       | MEAC-04840-002 | RADIATOR-MAIN       | A6063, T-5 +AL                     |
| 21       | MPAC-16220-004 | BRACKET-RADIATOR(S) | US COATING T1.0                    |
| 22       | MPAC-16170-004 | BRACKET-PCB         | US Coating t1.0                    |
| 23       | MJAF-15640-ZZ4 | FOOT(A)             |                                    |
| 24       | MPAC-04810-002 | CHASSIS-BOTTOM      | US Coating t1.2                    |
| 25       | MRAG-13050-004 | CUSHION-A           | FELT 250x10x0.5 S                  |
| 26       | MRAG-13030-004 | CUSHION-A           | EVA(VE-45),15X15X12T               |
| 27       | MJAF-16140-004 | SUPPORT-PCB         | ABS-720                            |
| 28       | MPAC-04760-003 | CHASSIS-PANEL       | US Coating t1.0                    |
| 30       | MEAC-08215-004 | RADIATOR-T/R        | AL                                 |
| 31       | MEAC-12693-004 | HEAT-SINK (TR)      | AL                                 |
| 32       | MPAC-04771-ZZ2 | CHASSIS-BACK        | US Coating t1.0 "AVR18RDS"         |
| 32       | MPAC-04770-ZZ2 | CHASSIS-BACK        | US Coating t1.0 "AVR5"             |
| 33       | MMAC-12060-004 | TERMINAL-GND        |                                    |
| 34       | MRAG-13040-004 | CUSHION-A           | FELT 437x10x0.5 S                  |
| 35       | MPAC-04820-ZZ2 | CHASSIS-TOP         | VCM t0.95(SECC0.8+PVC0.15)         |
| 36       | MJAG-00280-003 | CORD-BUSH           | NIFCO                              |
| 37       | ACAC-00393-002 | CORD-AC ASS'Y       | KKJ-1004A,JE201-03,JE203T "AVR18RC |
| 37       | ACAC-00413-000 | CORD-AC ASS'Y       | KE-01P,JE201-03,JE203T "AVR5"      |
| A        | XSTB-40080-ZB8 | SCREW-TAPPING       | BHT3T 4x8 FE-ZB                    |
| B        | XSTB-40080-ZY8 | SCREW-TAPPING       | BHT3T 4x8 FE-ZY                    |
| C        | XSTS-30180-ZY4 | SCREW-TAPPING       | PHWT2T 3x18 FE-ZY                  |
| D        | XSTS-30080-ZY4 | SCREW-TAPPING       | PHWT2T 3x8 FE-ZY                   |
| E        | MMTC-12180-004 | SCREW-BH/W          |                                    |
| F        | MMAC-15650-004 | SCREW-RADIATOR      |                                    |
| G        | MMAC-03592-004 | SCREW-T/P-TOOTH     | BH T2T 3X10 FE-ZB                  |
| H        | XSTB-30080-ZB4 | SCREW-TAPPING       | BHT2T 3x8 FE-ZB                    |
| I        | XSTB-30080-ZY4 | SCREW-TAPPING       | BHT2T 3x8 FE-ZY                    |
| J        | XSTB-30100-ZY4 | SCREW-TAPPING       | BHT2T 3x10 FE-ZY                   |
| K        | XSTB-30100-ZB4 | SCREW-TAPPING       | BHT2T 3x10 FE-ZB                   |
| **       | MJAG-04540-004 | CABLE-TIE-L80       | *                                  |
| **       | MMSC-00900-004 | AIR-STAPLER         |                                    |
| **       | MWAW-00910-003 | PALLETS             | 1040X1126X141                      |
| **       | YGAP-14250-ZZ4 | BOX-GIFT            | DW-3                               |
| **       | YIAR-12000-ZZA | INST-MANUAL         |                                    |
| **       | YSAP-12070-002 | CUSHION-L/R         | EPS                                |
| **       | YVAP-01862-ZZ4 | POLY-BAG-I(G)       |                                    |
| **       | YVAP-13320-ZZ4 | TOILON-SHEET        | 750x1200, 0.5t                     |
| **       | YWAR-12000-ZZA | WARRANTY-CARD       |                                    |
| **       | 7JJG-00212-001 | WRAP                | **                                 |

## ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTICE : Products marked with  $\Delta$  have special characteristics important to safety.

If you replace any of these components, read carefully the product safety notice in this manual.

Don't degrade the safety of the product through improper servicing.

Resistor / Capacitor tolerance - D : ( $\pm 0.5\%$ ), J : ( $\pm 5\%$ ), K : ( $\pm 10\%$ ), M : ( $\pm 20\%$ ), Z : (+80, -20%)

| Ref. No.                  | Part No.       | Description                                     |
|---------------------------|----------------|---|
| <b>1. MAIN P.C. BOARD</b> |                |   |
| <b>FUSES</b>              |                |   |
| $\Delta$ F101             | FGFB-O5002-831 | FUSE GLASS 5A 125V 5x20 U/C SB "AVR5 ONLY"      |
| $\Delta$ F101             | FGFB-S3152-837 | FUSE GLASS 3.15A 250V V/S/B T "AVR18 ONLY"      |
| $\Delta$ F102             | FGFB-S2502-837 | FUSE GLASS 2.5A 250V V/S/B T "AVR18 ONLY"       |
| $\Delta$ F103             | FGFB-O3151-831 | FUSE GLASS 315mA 125V 5x20 U/C SB "AVR5 ONLY"   |
| $\Delta$ F103             | FGFB-S3151-837 | FUSE GLASS 315mA 250V V/S/B T "AVR18 ONLY"      |
| $\Delta$ F104             | FGFB-O2002-831 | FUSE GLASS 2A 125V 51S "AVR5 ONLY"              |
| $\Delta$ F104             | FGFB-S2002-837 | FUSE GLASS 2A 250V 50T "AVR18 ONLY"             |
| $\Delta$ F105             | FGFB-O2002-831 | FUSE GLASS 2A 125V 51S "AVR5 ONLY"              |
| $\Delta$ F105             | FGFB-S2002-837 | FUSE GLASS 2A 250V 50T "AVR18 ONLY"             |
| $\Delta$ F106             | FGFB-O8001-831 | FUSE GLASS 800mA 125V 51S "AVR5 ONLY"           |
| $\Delta$ F106             | FGFB-S8001-837 | FUSE GLASS 800mA 250V V/S/B T "AVR18 ONLY"      |
| <b>CAPACITORS</b>         |                |   |
| C1                        | CCAT-J473Z-AAF | CAPACITOR CERAMIC 0.047uF Z 50V F T             |
| C2                        | CCAT-J473Z-AAF | CAPACITOR CERAMIC 0.047uF Z 50V F T             |
| C3                        | CCAT-J473Z-AAF | CAPACITOR CERAMIC 0.047uF Z 50V F T             |
| C4                        | CEET-E102M-HL0 | CAPACITOR E/ALUMINUM 1000uF M 16V 10x16 T       |
| C5                        | CEET-J1R0M-CIO | CAPACITOR E/ALUMINUM 1.0uF M 50V 5x11 T         |
| C6                        | CCAT-J104Z-AAF | CAPACITOR CERAMIC 0.1uF Z 50V F T               |
| C7                        | CEET-JR33M-CIO | CAPACITOR E/ALUMINUM 0.33uF M 50V 5x11 T        |
| C8                        | CEET-J1R0M-CIO | CAPACITOR E/ALUMINUM 1.0uF M 50V 5x11 T         |
| $\Delta$ C9               | CACS-S472M-180 | CAPACITOR AC 0.0047uF 250V                      |
| $\Delta$ C10              | CFMT-S104K-GIO | CAPACITOR F/POLYESTR 0.1uF K 250V 9.5x11 TL     |
| $\Delta$ C11              | CFMT-S104K-GIO | CAPACITOR F/POLYESTR 0.1uF K 250V 9.5x11 TL     |
| $\Delta$ C12              | CFMT-S104K-GIO | CAPACITOR F/POLYESTR 0.1uF K 250V 9.5x11 TL     |
| $\Delta$ C13              | CFMT-S104K-GIO | CAPACITOR F/POLYESTR 0.1uF K 250V 9.5x11 TL     |
| $\Delta$ C14              | CFMT-S104K-GIO | CAPACITOR F/POLYESTR 0.1uF K 250V 9.5x11 TL     |
| C15                       | CEEZ-L104M-SV3 | CAPACITOR E/ALUMINUM 10000uF M 63V 35x50 SMH    |
| C16                       | CEEZ-L104M-SV3 | CAPACITOR E/ALUMINUM 10000uF M 63V 35x50 SMH    |
| C17                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C18                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C19                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C20                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C21                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C22                       | CEEM-G222M-LR1 | CAPACITOR E/ALUMINUM 2200uF M 35V 16x31.5 U M   |
| C23                       | CEEM-G222M-LR1 | CAPACITOR E/ALUMINUM 2200uF M 35V 16x31.5 U M   |
| C24                       | CEET-J1R0M-CIO | CAPACITOR E/ALUMINUM 1.0uF M 50V 5x11 T         |
| C25                       | CEET-J1R0M-CIO | CAPACITOR E/ALUMINUM 1.0uF M 50V 5x11 T         |
| C26                       | CCCT-J104Z-OFF | CAPACITOR CERAMIC 0.1uF Z 50V F T               |
| C27                       | CCCT-J104Z-OFF | CAPACITOR CERAMIC 0.1uF Z 50V F T               |
| C28                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C29                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C30                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C31                       | CEET-E222M-KL0 | CAPACITOR E/ALUMINUM 2200uF M 16V 12.5x16 T     |
| C32                       | CEET-J1R0M-CIO | CAPACITOR E/ALUMINUM 1.0uF M 50V 5x11 T         |
| C33                       | CCCT-J104Z-OFF | CAPACITOR CERAMIC 0.1uF Z 50V F T               |
| C36                       | CCCT-J103Z-ODF | CAPACITOR CERAMIC 0.01uF Z 50V F T              |
| C42                       | CEET-F220M-CIO | CAPACITOR E/ALUMINUM 22uF M 25V 5x11 T          |
| C43                       | CCCT-J222K-0DB | CAPACITOR CERAMIC 2200PF K 50V B T "AVR18 ONLY" |
| C44                       | CCCT-J222K-0DB | CAPACITOR CERAMIC 2200PF K 50V B T "AVR18 ONLY" |
| C45                       | CCCT-J222K-0DB | CAPACITOR CERAMIC 2200PF K 50V B T "AVR18 ONLY" |
| C46                       | CCCT-J222K-0DB | CAPACITOR CERAMIC 2200PF K 50V B T "AVR18 ONLY" |
| C47                       | CCCT-J222K-0DB | CAPACITOR CERAMIC 2200PF K 50V B T "AVR18 ONLY" |
| C48                       | CCCT-J222K-0DB | CAPACITOR CERAMIC 2200PF K 50V B T "AVR18 ONLY" |
| C49                       | CCCT-J222K-0DB | CAPACITOR CERAMIC 2200PF K 50V B T "AVR18 ONLY" |
| C50                       | CCCT-J222K-0DB | CAPACITOR CERAMIC 2200PF K 50V B T "AVR18 ONLY" |
| C51                       | CCCT-J222K-0DB | CAPACITOR CERAMIC 2200PF K 50V B T "AVR18 ONLY" |
| C52                       | CCCT-J222K-0DB | CAPACITOR CERAMIC 2200PF K 50V B T "AVR18 ONLY" |
| C54                       | CEET-C471M-FI1 | CAPACITOR E/ALUMINUM 470uF M 6.3V 8x11.5 U T    |
| C55                       | CEET-J1R0M-CIO | CAPACITOR E/ALUMINUM 1.0uF M 50V 5x11 T         |
| C56                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C57                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C58                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C59                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C60                       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR 0.047uF J 100V 8.9x13 T    |
| C61                       | CEET-F470M-CIO | CAPACITOR E/ALUMINUM 47uF M 25V 5x11 T          |

| Ref. No.                   | Part No.       | Description          |                            |
|----------------------------|----------------|----------------------|----------------------------|
| C62                        | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T          |
| C63                        | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T          |
| C64                        | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T          |
| C65                        | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T          |
| C66                        | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T          |
| C67                        | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T         |
| C68                        | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T         |
| C69                        | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T         |
| C70                        | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T         |
| C71                        | CCAT-J473Z-AAF | CAPACITOR CERAMIC    | 0.047uF Z 50V F T          |
| C72                        | CCAT-J473Z-AAF | CAPACITOR CERAMIC    | 0.047uF Z 50V F T          |
| C73                        | CCAT-J221K-AAB | CAPACITOR CERAMIC    | 220PF K 50V B T            |
| C74                        | CCAT-J221K-AAB | CAPACITOR CERAMIC    | 220PF K 50V B T            |
| C75                        | CCAT-J221K-AAB | CAPACITOR CERAMIC    | 220PF K 50V B T            |
| C76                        | CCAT-J221K-AAB | CAPACITOR CERAMIC    | 220PF K 50V B T            |
| C77                        | CEET-G471M-HN1 | CAPACITOR E/ALUMINUM | 470uF M 35V 10x20 U T      |
| <b>DIODES</b>              |                |                      |                            |
| ▲D1                        | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D2                        | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D3                        | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D4                        | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| D5                         | DDTZ-G043B-SO0 | DIODE ZENER          | MTZ4.3B 4.17-4.43 DO40 T   |
| ▲D6                        | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D7                        | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D8                        | DDMR-00230-T10 | DIODE-RECTIFIER      | GP60-04F(400V 6A)          |
| ▲S9                        | DDMR-00230-T10 | DIODE-RECTIFIER      | GP60-04F(400V 6A)          |
| ▲D10                       | DDMR-00230-T10 | DIODE-RECTIFIER      | GP60-04F(400V 6A)          |
| ▲D11                       | DDMR-00230-T10 | DIODE-RECTIFIER      | GP60-04F(400V 6A)          |
| ▲D12                       | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D13                       | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D14                       | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D15                       | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D16                       | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D17                       | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| D18                        | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D19                        | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| ▲D20                       | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D21                       | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| D25                        | DDTZ-G091B-SO0 | DIODE ZENER          | MTZ9.1B 9.01 DO40 T        |
| ▲D26                       | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| ▲D27                       | DDTR-00040-T10 | DIODE-RECTIFIER      | 1N4004S(400V 1A 0.6mm) T   |
| <b>INTEGRATED CIRCUITS</b> |                |                      |                            |
| ▲IC1                       | ICRG-00091-SE0 | IC REGULATOR         | KA7806 6V 3mm TO-220       |
| ▲IC2                       | ICRG-00061-SE0 | IC REGULATOR         | KA7815 15V 3mm TO-220      |
| ▲IC3                       | ICRG-00251-SE0 | IC REGULATOR         | KA7915 15V 3mm TO-220      |
| ▲IC4                       | ICRG-00091-SE0 | IC REGULATOR         | KA7806 6V 3mm TO-220       |
| IC5                        | ICPC-00010-TB0 | IC PHOTOCOUPLER      | LTV817B DIP4               |
| IC6                        | ICOP-00134-SG0 | IC DUAL OP AMP       | NJM4558M SOP8              |
| IC7                        | ICOP-00134-SG0 | IC DUAL OP AMP       | NJM4558M SOP8              |
| <b>CONNECTORS</b>          |                |                      |                            |
|                            | VSTH-00101-101 | POSISTOR             | P43T6D100BW23              |
|                            | U345-6A354-450 | WIRE-ASS'Y           | UL1617#18 BLU-540 3P       |
|                            | LLA3-35401-E10 | CARD CABLE           | KF2B35/400 P7S9 B9 VS3 VB3 |
| ▲CW1                       | KNCW-00990-2T9 | CONNECTOR-WAFER      | JE202A-1T-02               |
| ▲CW2                       | KNCW-00990-2T9 | CONNECTOR-WAFER      | JE202A-1T-02               |
| ▲CW3                       | KNCW-00990-2T9 | CONNECTOR-WAFER      | JE202A-1T-02               |
| CW4                        | KNCW-00140-6TM | CONNECTOR-WAFER      | 5267-06A 2.5mm MILK        |
| CW5                        | KNCW-00140-6TM | CONNECTOR-WAFER      | 5267-06A 2.5mm MILK        |
| ▲CW6                       | KNCW-00970-3T9 | CONNECTOR-WAFER      | JE202-1T-3P                |
| CW7                        | KNCW-00140-6TM | CONNECTOR-WAFER      | 5267-06A 2.5mm MILK        |
| CW8                        | KNCW-00140-2TM | CONNECTOR-WAFER      | 5267-02A 2.5mm MILK        |
| CW9                        | KNCW-00140-3TM | CONNECTOR-WAFER      | 5267-03A 2.5mm MILK        |
| CW10                       | KNCW-06380-35S | CONNECTOR-WAFER      | GF120-35S-TS 1.25mm S      |
| CW11                       | KNCW-01520-ES9 | CONNECTOR-WAFER      | 35336-1410 20MM 14P        |
| CW12                       | KNCW-01520-DS9 | CONNECTOR-WAFER      | 35336-1310 20MM 13P        |
| CW13                       | KNCW-01520-CS9 | CONNECTOR-WAFER      | 35336-1210 2M/M 12PIN      |
| CW15                       | KNCW-01520-9S9 | CONNECTOR-WAFER      | 35336-0910 2M/M 9P         |
| CW16                       | KNCW-00140-8TM | CONNECTOR-WAFER      | 5267-08A 2.5mm MILK        |
| CW17                       | KNCW-00140-8TM | CONNECTOR-WAFER      | 5267-08A 2.5mm MILK        |
| CW18                       | KNCW-00140-2TM | CONNECTOR-WAFER      | 5267-02A 2.5mm MILK        |

| Ref. No.             | Part No.       | Description          |                           |
|----------------------|----------------|----------------------|---------------------------|
| CW20                 | KNCW-01520-8S9 | CONNECTOR-WAFER      | 35336-0810 2M/M 8P        |
| CW21                 | KNCW-01520-BS9 | CONNECTOR-WAFER      | 35336-1110 20MM 11P       |
|                      | KNCW-06410-01T | CONNECTOR-WAFER      | YFW-800-01                |
| <b>RESISTORS</b>     |                |                      |                           |
| R1                   | RMOR-H100J-0C0 | RESISTOR-METAL OXIDE | 10ohm 1W J ERG(X)1SJ100E  |
| R3                   | RCFT-E222J-000 | RESISTOR-CARBON FILM | 2.2Kohm 1/5W J T          |
| R4                   | RCFT-E222J-000 | RESISTOR-CARBON FILM | 2.2Kohm 1/5W J T          |
| R5                   | RCFT-E222J-000 | RESISTOR-CARBON FILM | 2.2Kohm 1/5W J T          |
| R6                   | RCFT-E823J-000 | RESISTOR-CARBON FILM | 82Kohm 1/5W J T           |
| R7                   | RMOH-J4R7J-030 | RESISTOR-METAL OXIDE | 4.7ohm 2W J CRH200        |
| R8                   | RMOH-J4R7J-030 | RESISTOR-METAL OXIDE | 4.7ohm 2W J CRH200        |
| R9                   | RMOH-H100J-030 | RESISTOR-METAL OXIDE | 10ohm 1W J H              |
| R10                  | RCFT-F4R7J-010 | RESISTOR-CARBON FILM | 4.7ohm 1/4W J T           |
| R11                  | RCFT-F4R7J-010 | RESISTOR-CARBON FILM | 4.7ohm 1/4W J T           |
| R12                  | RCFT-E3R3J-000 | RESISTOR-CARBON FILM | 3.3ohm 1/5W J T           |
| R13                  | RCFT-E3R3J-000 | RESISTOR-CARBON FILM | 3.3ohm 1/5W J T           |
| R17                  | RCFT-E332J-000 | RESISTOR-CARBON FILM | 3.3Kohm 1/5W J T          |
| R18                  | RCFT-E101J-000 | RESISTOR-CARBON FILM | 100ohm 1/5W J T           |
| R19                  | RCFT-E392J-000 | RESISTOR-CARBON FILM | 3.9Kohm 1/5W J T          |
| R20                  | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T            |
| R21                  | RCFT-E473J-000 | RESISTOR-CARBON FILM | 47Kohm 1/5W J T           |
| R22                  | RCFT-E271J-000 | RESISTOR-CARBON FILM | 270ohm 1/5W J T           |
| ▲R23                 | RCFT-G335K-1D0 | RESISTOR-CARBON FILM | 3.3Mohm 1/2W ERC12UGK335V |
| R25                  | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T           |
| R26                  | RCFT-E152J-000 | RESISTOR-CARBON FILM | 1.5Kohm 1/5W J T          |
| R27                  | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T          |
| R29                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| R30                  | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T           |
| R31                  | RCFT-E153J-000 | RESISTOR-CARBON FILM | 15Kohm 1/5W J T           |
| R32                  | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T          |
| R33                  | RCFT-E332J-000 | RESISTOR-CARBON FILM | 3.3Kohm 1/5W J T          |
| R34                  | RCFT-E683J-000 | RESISTOR-CARBON FILM | 68Kohm 1/5W J T           |
| R35                  | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T           |
| R36                  | RMOR-H100J-0C0 | RESISTOR-METAL OXIDE | 10ohm 1W J ERG(X)1SJ100E  |
| R37                  | RMOR-H100J-0C0 | RESISTOR-METAL OXIDE | 10ohm 1W J ERG(X)1SJ100E  |
| R38                  | RMOR-H100J-0C0 | RESISTOR-METAL OXIDE | 10ohm 1W J ERG(X)1SJ100E  |
| R39                  | RMOR-H100J-0C0 | RESISTOR-METAL OXIDE | 10ohm 1W J ERG(X)1SJ100E  |
| R40                  | RMOR-H100J-0C0 | RESISTOR-METAL OXIDE | 10ohm 1W J ERG(X)1SJ100E  |
| R41                  | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T            |
| R42                  | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T            |
| R43                  | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T          |
| R44                  | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T          |
| R45                  | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T          |
| R46                  | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T          |
| R47                  | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T           |
| R48                  | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T          |
| R49                  | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T           |
| R50                  | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T          |
| R51                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| R52                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| R53                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| R54                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| R55                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| R56                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| R57                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| R58                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| R59                  | RCFT-E152J-000 | RESISTOR-CARBON FILM | 1.5Kohm 1/5W J T          |
| R60                  | RCFT-E152J-000 | RESISTOR-CARBON FILM | 1.5Kohm 1/5W J T          |
| R61                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| R62                  | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T            |
| <b>TRANSISTORS</b>   |                |                      |                           |
| Q1                   | TRTD-00200-SD0 | TRANSISTOR N-L FREQ  | KTD-1302 TO92             |
| Q2                   | TRTA-00940-SD0 | TRANSISTOR P-H FREQ  | KRA107M W/RESIST TO92M    |
| Q3                   | TRTC-0016G-SD0 | TRANSISTOR N-H FREQ  | KTC3198-GR TO92           |
| Q4                   | TRTC-0016G-SD0 | TRANSISTOR N-H FREQ  | KTC3198-GR TO92           |
| Q5                   | TRTC-0016G-SD0 | TRANSISTOR N-H FREQ  | KTC3198-GR TO92           |
| Q6                   | TRTA-0067Y-SD0 | TRANSISTOR P-H FREQ  | KTA1267-Y TO92M           |
| <b>MISCELLANEOUS</b> |                |                      |                           |
| GND1                 | MPAC-03811-004 | TERMINAL-GND         |                           |
| GND2                 | MPAC-03811-004 | TERMINAL-GND         |                           |

| Ref. No. | Part No.       | Description       |                                    |
|----------|----------------|-------------------|------------------------------------|
| GND3     | MPAC-03811-004 | TERMINAL-GND      |                                    |
| FC1      | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE                 |
| FC2      | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE                 |
| FC3      | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE "AVR 18 ONLY"   |
| FC4      | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE "AVR 18 ONLY"   |
| FC5      | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE                 |
| FC6      | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE                 |
| FC7      | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE                 |
| FC8      | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE                 |
| FC9      | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE                 |
| FC10     | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE                 |
| FC11     | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE                 |
| FC12     | MPAC-11620-004 | FUSE CLIP         | 5.2Pi TAPPING TYPE                 |
| RL1      | ESRY-00290-124 | RELAY             | DG12D1-O(M) TV-5 S.P.S.T,AC250V 5/ |
|          | MEAC-08215-004 | RADIATOR-TR       |                                    |
|          | MEAC-12693-004 | HEAT-SINK(TR)     |                                    |
| ▲        | PTAP-03420-CJU | TRANSFORMER-POWER | A96-342C-U 120V/60Hz "AVR5 ONLY"   |
| ▲        | PTAP-03420-YJV | TRANSFORMER-POWER | A96-342Y-V 230V/50Hz "AVR18 ONLY"  |
| PCB      | PCSR-04790-11B | PCB-MAIN          | A1R-479                            |
| ▲ST3     | PTAC-03260-CJU | TRANSFORMER-POWER | A35-326C-U 120V/60Hz "AVR5 ONLY"   |
| ▲ST3     | PTAC-03260-YJV | TRANSFORMER-POWER | A35-326Y-V 230V/50Hz "AVR18 ONLY"  |
| ▲        | SKAO-00190-C50 | AC OUTLET         | S2-764T-214 "AVR5 ONLY"            |
| ▲        | SKAO-00130-4CV | AC OUTLET         | YKE31-0090 "AVR18 ONLY"            |
| JACK1    | SKPH-00520-360 | MINIATURE JACK    | HSJ1002-01-1020                    |
| ST4      | TESP-00401-02P | TERMINAL SPEAKER  | SH0210381P 2P                      |
| SH1      | TESP-00460-08S | TERMINAL SPEAKER  | SH0810361P 8P                      |

## 1-1. POWER SWITCH P.C. BOARD

|        |                | MISCELLANEOUS      |               |
|--------|----------------|--------------------|---------------|
| ▲SW784 | SWPU-00591-059 | SWITCH-PUSH        | SDDLBI-A1-F-2 |
| PCB    | PCSR-04790-11B | PCB-PUSH POWER S/W | A1R-479       |

|       |                | CONNECTORS      |              |
|-------|----------------|-----------------|--------------|
| ▲CW19 | KNCW-00990-2T9 | CONNECTOR-WAFER | JE202A-1T-02 |

## 2. 5-CH. AMP P.C. BOARD

|      |                | CAPACITORS           |                         |
|------|----------------|----------------------|-------------------------|
| C101 | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T       |
| C102 | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T       |
| C103 | CCTT-J680J-0FC | CAPACITOR CERAMIC    | 68PF J 50V CH T         |
| C104 | CCTT-J680J-0FC | CAPACITOR CERAMIC    | 68PF J 50V CH T         |
| C105 | CCAT-J681K-AAB | CAPACITOR CERAMIC    | 680PF K 50V B T         |
| C106 | CCAT-J681K-AAB | CAPACITOR CERAMIC    | 680PF K 50V B T         |
| C107 | CEET-F330M-CIO | CAPACITOR E/ALUMINUM | 33uF M 25V 5x11 T       |
| C108 | CEET-F330M-CIO | CAPACITOR E/ALUMINUM | 33uF M 25V 5x11 T       |
| C109 | CEET-F220M-CIO | CAPACITOR E/ALUMINUM | 22uF M 25V 5x11 T       |
| C110 | CEET-F220M-CIO | CAPACITOR E/ALUMINUM | 22uF M 25V 5x11 T       |
| C111 | CEET-C471M-FI1 | CAPACITOR E/ALUMINUM | 470uF M 6.3V 8x11.5 U T |
| C112 | CEET-C471M-FI1 | CAPACITOR E/ALUMINUM | 470uF M 6.3V 8x11.5 U T |
| C115 | CEET-L331M-DI1 | CAPACITOR E/ALUMINUM | 330uF M 63V 10x20 SHL T |
| C116 | CEET-L331M-DI1 | CAPACITOR E/ALUMINUM | 330uF M 63V 10x20 SHL T |
| C117 | CEET-L331M-DI1 | CAPACITOR E/ALUMINUM | 330uF M 63V 10x20 SHL T |
| C118 | CEET-L331M-DI1 | CAPACITOR E/ALUMINUM | 330uF M 63V 10x20 SHL T |
| C119 | CCTT-J220J-0BZ | CAPACITOR CERAMIC    | 22PF J 50V SL T         |
| C120 | CCTT-J220J-0BZ | CAPACITOR CERAMIC    | 22PF J 50V SL T         |
| C121 | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T       |
| C122 | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T       |
| C123 | CEET-J4R7M-CIO | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T      |
| C124 | CEET-J4R7M-CIO | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T      |
| C125 | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T       |
| C126 | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T       |
| C127 | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T       |
| C128 | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T       |
| C129 | CCTT-J680J-0FC | CAPACITOR CERAMIC    | 68PF J 50V CH T         |
| C130 | CCTT-J680J-0FC | CAPACITOR CERAMIC    | 68PF J 50V CH T         |
| C131 | CCAT-J681K-AAB | CAPACITOR CERAMIC    | 680PF K 50V B T         |
| C132 | CCAT-J681K-AAB | CAPACITOR CERAMIC    | 680PF K 50V B T         |
| C133 | CEET-F330M-CIO | CAPACITOR E/ALUMINUM | 33uF M 25V 5x11 T       |
| C134 | CEET-F330M-CIO | CAPACITOR E/ALUMINUM | 33uF M 25V 5x11 T       |
| C135 | CEET-F220M-CIO | CAPACITOR E/ALUMINUM | 22uF M 25V 5x11 T       |
| C136 | CEET-F220M-CIO | CAPACITOR E/ALUMINUM | 22uF M 25V 5x11 T       |
| C137 | CEET-C471M-FI1 | CAPACITOR E/ALUMINUM | 470uF M 6.3V 8x11.5 U T |

| Ref. No.           | Part No.       | Description          |                            |
|--------------------|----------------|----------------------|----------------------------|
| C138               | CEET-C471M-FI1 | CAPACITOR E/ALUMINUM | 470uF M 6.3V 8x11.5 U T    |
| C141               | CEET-L331M-DI1 | CAPACITOR E/ALUMINUM | 330uF M 63V 10x20 SHL T    |
| C142               | CEET-L331M-DI1 | CAPACITOR E/ALUMINUM | 330uF M 63V 10x20 SHL T    |
| C143               | CEET-L331M-DI1 | CAPACITOR E/ALUMINUM | 330uF M 63V 10x20 SHL T    |
| C144               | CEET-L331M-DI1 | CAPACITOR E/ALUMINUM | 330uF M 63V 10x20 SHL T    |
| C145               | CCTT-J220J-0BZ | CAPACITOR CERAMIC    | 22PF J 50V SL T            |
| C146               | CCTT-J220J-0BZ | CAPACITOR CERAMIC    | 22PF J 50V SL T            |
| C147               | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T          |
| C148               | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T          |
| C149               | CEET-J4R7M-CIO | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T         |
| C150               | CEET-J4R7M-CIO | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T         |
| C151               | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T          |
| C152               | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T          |
| C153               | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T          |
| C154               | CCTT-J680J-0FC | CAPACITOR CERAMIC    | 68PF J 50V CH T            |
| C155               | CCAT-J681K-AAB | CAPACITOR CERAMIC    | 680PF K 50V B T            |
| C156               | CEET-F330M-CIO | CAPACITOR E/ALUMINUM | 33uF M 25V 5x11 T          |
| C157               | CEET-F220M-CIO | CAPACITOR E/ALUMINUM | 22uF M 25V 5x11 T          |
| C158               | CEET-C471M-FI1 | CAPACITOR E/ALUMINUM | 470uF M 6.3V 8x11.5 U T    |
| C160               | CEET-L331M-DI1 | CAPACITOR E/ALUMINUM | 330uF M 63V 10x20 SHL T    |
| C161               | CEET-L331M-DI1 | CAPACITOR E/ALUMINUM | 330uF M 63V 10x20 SHL T    |
| C162               | CCTT-J220J-0BZ | CAPACITOR CERAMIC    | 22PF J 50V SL T            |
| C163               | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T          |
| C164               | CEET-J4R7M-CIO | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T         |
| C165               | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T          |
| <b>DIODES</b>      |                |                      |                            |
| D101               | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D102               | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D103               | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D104               | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D105               | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D106               | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D107               | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D108               | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D109               | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D110               | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| <b>COILS</b>       |                |                      |                            |
| L101               | KIBK-00190-E40 | INDUCTOR             | INDUCTOR, 0.7uH            |
| L102               | KIBK-00190-E40 | INDUCTOR             | INDUCTOR, 0.7uH            |
| L103               | KIBK-00190-E40 | INDUCTOR             | INDUCTOR, 0.7uH            |
| L104               | KIBK-00190-E40 | INDUCTOR             | INDUCTOR, 0.7uH            |
| L105               | KIBK-00190-E40 | INDUCTOR             | INDUCTOR, 0.7uH            |
| <b>CONNECTORS</b>  |                |                      |                            |
| CN101              | KNCW-00240-AT9 | CONNECTOR-WAFER      | 53014-10 2.0mm WHT         |
| CN102              | KNCW-00140-5TM | CONNECTOR-WAFER      | 5267-05A 2.5mm MILK        |
| CW103              | U810-7M412-200 | WIRE-ASS'Y           | 1007#20 VIT-120 8P         |
| CW104              | U610-5M426-200 | WIRE-ASS'Y           | UL1007#20 GRN-260 6P       |
|                    | U1T1-01520-Z10 | WIRE-ASS'Y           | 1007#22 BLK-200 3.2pi      |
|                    | U1T3-01330-T40 | WIRE-ASS'Y           | 1007#18 BLK-300 YFH-800    |
| <b>TRANSISTORS</b> |                |                      |                            |
| Q101               | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ  | KTA1268-GR TO92            |
| Q102               | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ  | KTA1268-GR TO92            |
| Q103               | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ  | KTA1268-GR TO92            |
| Q104               | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ  | KTA1268-GR TO92            |
| Q105               | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ  | KTA1268-GR TO92            |
| Q106               | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ  | KTA1268-GR TO92            |
| Q107               | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ  | KTA1268-GR TO92            |
| Q108               | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ  | KTA1268-GR TO92            |
| Q109               | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ  | KTC3200-GR TO92            |
| Q110               | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ  | KTC3200-GR TO92            |
| Q111               | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ  | KTC3200-GR TO92            |
| Q112               | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ  | KTC3200-GR TO92            |
| Q113               | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ  | KTA1268-GR TO92            |
| Q114               | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ  | KTA1268-GR TO92            |
| Q115               | TRTA-0013Y-SD0 | TRANSISTOR N-H FREQ  | KTA1024-Y TO92L            |
| Q116               | TRTA-0013Y-SD0 | TRANSISTOR N-H FREQ  | KTA1024-Y TO92L            |
| Q117               | TRTC-0087Y-SD0 | TRANSISTOR N-H FREQ  | KTC3206-Y TO92L            |
| Q118               | TRTC-0087Y-SD0 | TRANSISTOR N-H FREQ  | KTC3206-Y TO92L            |

| Ref. No. | Part No.       | Description         |                        |
|----------|----------------|---------------------|------------------------|
| Q119     | TRSC-01680-SB0 | TRANSISTOR N-H FREQ | 2SC4137 TO-126FP       |
| Q120     | TRSC-01680-SB0 | TRANSISTOR N-H FREQ | 2SC4137 TO-126FP       |
| Q121     | TRSC-01540-SJ0 | TRANSISTOR N-H FREQ | 2SC4883A               |
| Q122     | TRSC-01540-SJ0 | TRANSISTOR N-H FREQ | 2SC4883A               |
| Q123     | TRSA-01450-SJ0 | TRANSISTOR N-H FREQ | 2SA1859A               |
| Q124     | TRSA-01450-SJ0 | TRANSISTOR N-H FREQ | 2SA1859A               |
| ▲Q125    | TRTC-0130Y-SJ0 | TRANSISTOR N-H FREQ | 2SC4468-Y TO3P         |
| ▲Q126    | TRTC-0130Y-SJ0 | TRANSISTOR N-H FREQ | 2SC4468-Y TO3P         |
| ▲Q127    | TRTA-0090Y-SJ0 | TRANSISTOR P-H FREQ | 2SA1695-Y TO3P         |
| ▲Q128    | TRTA-0090Y-SJ0 | TRANSISTOR P-H FREQ | 2SA1695-Y TO3P         |
| Q129     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q130     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q131     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q132     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q133     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q134     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q135     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q136     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q137     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q138     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q139     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q140     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q141     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q142     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q143     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q144     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q145     | TRTA-0013Y-SD0 | TRANSISTOR N-H FREQ | KTA1024-Y              |
| Q146     | TRTA-0013Y-SD0 | TRANSISTOR N-H FREQ | KTA1024-Y              |
| Q147     | TRTC-0087Y-SD0 | TRANSISTOR N-H FREQ | KTC3206-Y TO92L        |
| Q148     | TRTC-0087Y-SD0 | TRANSISTOR N-H FREQ | KTC3206-Y TO92L        |
| Q149     | TRSC-01680-SB0 | TRANSISTOR N-H FREQ | 2SC4137 TO-126FP       |
| Q150     | TRSC-01680-SB0 | TRANSISTOR N-H FREQ | 2SC4137 TO-126FP       |
| Q151     | TRSC-01540-SJ0 | TRANSISTOR N-H FREQ | 2SC4883A               |
| Q152     | TRSC-01540-SJ0 | TRANSISTOR N-H FREQ | 2SC4883A               |
| Q153     | TRSA-01450-SJ0 | TRANSISTOR N-H FREQ | 2SA1859A               |
| Q154     | TRSA-01450-SJ0 | TRANSISTOR N-H FREQ | 2SA1859A               |
| ▲Q155    | TRTC-0130Y-SJ0 | TRANSISTOR N-H FREQ | 2SC4468-Y TO3P         |
| ▲Q156    | TRTC-0130Y-SJ0 | TRANSISTOR N-H FREQ | 2SC4468-Y TO3P         |
| ▲Q157    | TRTA-0090Y-SJ0 | TRANSISTOR P-H FREQ | 2SA1695-Y TO3P         |
| ▲Q158    | TRTA-0090Y-SJ0 | TRANSISTOR P-H FREQ | 2SA1695-Y TO3P         |
| Q159     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q160     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q161     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q162     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q163     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q164     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q165     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q166     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q167     | TRTA-0011G-SD0 | TRANSISTOR P-H FREQ | KTA1268-GR TO92        |
| Q168     | TRTA-0013Y-SD0 | TRANSISTOR N-H FREQ | KTA1024-Y              |
| Q169     | TRTC-0087Y-SD0 | TRANSISTOR N-H FREQ | KTC3206-Y TO92L        |
| Q170     | TRSC-01680-SB0 | TRANSISTOR N-H FREQ | 2SC4137 TO-126FP       |
| Q171     | TRSC-01540-SJ0 | TRANSISTOR N-H FREQ | 2SC4883A               |
| Q172     | TRSA-01450-SJ0 | TRANSISTOR N-H FREQ | 2SA1859A               |
| ▲Q173    | TRTC-0130Y-SJ0 | TRANSISTOR N-H FREQ | 2SC4468-Y TO3P         |
| ▲Q174    | TRTA-0090Y-SJ0 | TRANSISTOR P-H FREQ | 2SA1695-Y TO3P         |
| Q175     | TRTC-0015G-SD0 | TRANSISTOR N-H FREQ | KTC3200-GR TO92        |
| Q276     | TRTC-01700-SD0 | TRANSISTOR N-H FREQ | KRC107M W/RESIST TO92M |

## PCB

PCSR-04800-11B

MISCELLANEOUS  
PCB-AMP

A1R-480

R101  
R102  
R103  
R104  
R105  
R106  
R107  
R108  
R109  
R110  
R111RCFT-E102J-000  
RCFT-E102J-000  
RCFT-E333J-000  
RCFT-E333J-000  
RCFT-E150J-000  
RCFT-E150J-000  
RCFT-E751J-000  
RCFT-E751J-000  
RCFT-E150J-000  
RCFT-E150J-000  
RCFT-E751J-000

## RESISTORS

RESISTOR-CARBON FILM  
RESISTOR-CARBON FILM  
RESISTOR-CARBON FILM  
RESISTOR-CARBON FILM  
RESISTOR-CARBON FILM  
RESISTOR-CARBON FILM  
RESISTOR-CARBON FILM  
RESISTOR-CARBON FILM  
RESISTOR-CARBON FILM  
RESISTOR-CARBON FILM  
RESISTOR-CARBON FILM1Kohm 1/5W J T  
1Kohm 1/5W J T  
33Kohm 1/5W J T  
33Kohm 1/5W J T  
15ohm 1/5W J T  
15ohm 1/5W J T  
750ohm 1/5W J T  
750ohm 1/5W J T  
15ohm 1/5W J T  
15ohm 1/5W J T  
750ohm 1/5W J T



| Ref. No. | Part No.       | Description          |                          |
|----------|----------------|----------------------|--------------------------|
| R112     | RCFT-E751J-000 | RESISTOR-CARBON FILM | 750ohm 1/5W J T          |
| R113     | RCFT-E680J-000 | RESISTOR-CARBON FILM | 68ohm 1/5W J T           |
| R114     | RCFT-E680J-000 | RESISTOR-CARBON FILM | 68ohm 1/5W J T           |
| R115     | RCFT-E681J-000 | RESISTOR-CARBON FILM | 680ohm 1/5W J T          |
| R116     | RCFT-E681J-000 | RESISTOR-CARBON FILM | 680ohm 1/5W J T          |
| R117     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R118     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R119     | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T          |
| R120     | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T          |
| R121     | RCFT-E151J-000 | RESISTOR-CARBON FILM | 150ohm 1/5W J T          |
| R122     | RCFT-E151J-000 | RESISTOR-CARBON FILM | 150ohm 1/5W J T          |
| R123     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T         |
| R124     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T         |
| R125     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R126     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R127     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R128     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R129     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R130     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R131     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R132     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R133     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R134     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R135     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R136     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R137     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R138     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R139     | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T         |
| R140     | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T         |
| R141     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T          |
| R142     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T          |
| R143     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T          |
| R144     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T          |
| R145     | RCFT-E122J-000 | RESISTOR-CARBON FILM | 1.2Kohm 1/5W J T         |
| R146     | RCFT-E122J-000 | RESISTOR-CARBON FILM | 1.2Kohm 1/5W J T         |
| R147     | RCFT-E821J-000 | RESISTOR-CARBON FILM | 820ohm 1/5W J T          |
| R148     | RCFT-E821J-000 | RESISTOR-CARBON FILM | 820ohm 1/5W J T          |
| R149     | RCFT-E821J-000 | RESISTOR-CARBON FILM | 820ohm 1/5W J T          |
| R150     | RCFT-E821J-000 | RESISTOR-CARBON FILM | 820ohm 1/5W J T          |
| R151     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R152     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R153     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R154     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R155     | RMOR-H470J-OC0 | RESISTOR-METAL OXIDE | 47ohm 1W J ERG(X)1SJ470E |
| R156     | RMOR-H470J-OC0 | RESISTOR-METAL OXIDE | 47ohm 1W J ERG(X)1SJ470E |
| R157     | RMOR-H470J-OC0 | RESISTOR-METAL OXIDE | 47ohm 1W J ERG(X)1SJ470E |
| R158     | RMOR-H470J-OC0 | RESISTOR-METAL OXIDE | 47ohm 1W J ERG(X)1SJ470E |
| R159     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R160     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| ▲R161    | RMFS-LR27J-OJ0 | RESISTOR-METAL PLATE | 0.27ohm 5W J MPR-55R     |
| ▲R162    | RMFS-LR27J-OJ0 | RESISTOR-METAL PLATE | 0.27ohm 5W J MPR-55R     |
| R163     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R164     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R165     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R166     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R167     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R168     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R169     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R170     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R171     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T         |
| R172     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T         |
| R173     | RCFT-E202J-000 | RESISTOR-CARBON FILM | 2Kohm 1/5W J T           |
| R174     | RCFT-E202J-000 | RESISTOR-CARBON FILM | 2Kohm 1/5W J T           |
| R175     | RCFT-E911J-000 | RESISTOR-CARBON FILM | 910ohm 1/5W J T          |
| R176     | RCFT-E911J-000 | RESISTOR-CARBON FILM | 910ohm 1/5W J T          |
| R177     | RCFT-E682J-000 | RESISTOR-CARBON FILM | 6.8Kohm 1/5W J T         |
| R178     | RCFT-E682J-000 | RESISTOR-CARBON FILM | 6.8Kohm 1/5W J T         |
| R179     | RCFT-E243J-000 | RESISTOR-CARBON FILM | 24Kohm 1/5W J T          |
| R180     | RCFT-E243J-000 | RESISTOR-CARBON FILM | 24Kohm 1/5W J T          |
| R181     | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T           |
| R182     | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T           |
| R183     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R184     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R185     | RCFT-E150J-000 | RESISTOR-CARBON FILM | 15ohm 1/5W J T           |
| R186     | RCFT-E150J-000 | RESISTOR-CARBON FILM | 15ohm 1/5W J T           |
| R187     | RCFT-E751J-000 | RESISTOR-CARBON FILM | 750ohm 1/5W J T          |

| Ref. No. | Part No.       | Description          |                          |
|----------|----------------|----------------------|--------------------------|
| R188     | RCFT-E751J-000 | RESISTOR-CARBON FILM | 750ohm 1/5W J T          |
| R189     | RCFT-E150J-000 | RESISTOR-CARBON FILM | 15ohm 1/5W J T           |
| R190     | RCFT-E150J-000 | RESISTOR-CARBON FILM | 15ohm 1/5W J T           |
| R191     | RCFT-E751J-000 | RESISTOR-CARBON FILM | 750ohm 1/5W J T          |
| R192     | RCFT-E751J-000 | RESISTOR-CARBON FILM | 750ohm 1/5W J T          |
| R193     | RCFT-E680J-000 | RESISTOR-CARBON FILM | 68ohm 1/5W J T           |
| R194     | RCFT-E680J-000 | RESISTOR-CARBON FILM | 68ohm 1/5W J T           |
| R195     | RCFT-E681J-000 | RESISTOR-CARBON FILM | 680ohm 1/5W J T          |
| R196     | RCFT-E681J-000 | RESISTOR-CARBON FILM | 680ohm 1/5W J T          |
| R197     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R198     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R199     | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T          |
| R200     | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T          |
| R201     | RCFT-E151J-000 | RESISTOR-CARBON FILM | 150ohm 1/5W J T          |
| R202     | RCFT-E151J-000 | RESISTOR-CARBON FILM | 150ohm 1/5W J T          |
| R203     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T         |
| R204     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T         |
| R205     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R206     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R207     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R208     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R209     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R210     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R211     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R212     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R213     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R214     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R215     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R216     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R217     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R218     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R219     | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T         |
| R220     | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T         |
| R221     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T          |
| R222     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T          |
| R223     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T          |
| R224     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T          |
| R225     | RCFT-E122J-000 | RESISTOR-CARBON FILM | 1.2Kohm 1/5W J T         |
| R226     | RCFT-E122J-000 | RESISTOR-CARBON FILM | 1.2Kohm 1/5W J T         |
| R227     | RCFT-E821J-000 | RESISTOR-CARBON FILM | 820ohm 1/5W J T          |
| R228     | RCFT-E821J-000 | RESISTOR-CARBON FILM | 820ohm 1/5W J T          |
| R229     | RCFT-E821J-000 | RESISTOR-CARBON FILM | 820ohm 1/5W J T          |
| R230     | RCFT-E821J-000 | RESISTOR-CARBON FILM | 820ohm 1/5W J T          |
| R231     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R232     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R233     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R234     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R235     | RMOR-H470J-0C0 | RESISTOR-METAL OXIDE | 47ohm 1W J ERG(X)1SJ470E |
| R236     | RMOR-H470J-0C0 | RESISTOR-METAL OXIDE | 47ohm 1W J ERG(X)1SJ470E |
| R237     | RMOR-H470J-0C0 | RESISTOR-METAL OXIDE | 47ohm 1W J ERG(X)1SJ470E |
| R238     | RMOR-H470J-0C0 | RESISTOR-METAL OXIDE | 47ohm 1W J ERG(X)1SJ470E |
| R239     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R240     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| ▲R241    | RMFS-LR27J-0J0 | RESISTOR-METAL PLATE | 0.27ohm 5W J MPR-55R     |
| ▲R242    | RMFS-LR27J-0J0 | RESISTOR-METAL PLATE | 0.27ohm 5W J MPR-55R     |
| R243     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R244     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R245     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R246     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R247     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R248     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R249     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R250     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R251     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T         |
| R252     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T         |
| R253     | RCFT-E202J-000 | RESISTOR-CARBON FILM | 2Kohm 1/5W J T           |
| R254     | RCFT-E202J-000 | RESISTOR-CARBON FILM | 2Kohm 1/5W J T           |
| R255     | RCFT-E911J-000 | RESISTOR-CARBON FILM | 910ohm 1/5W J T          |
| R256     | RCFT-E911J-000 | RESISTOR-CARBON FILM | 910ohm 1/5W J T          |
| R257     | RCFT-E682J-000 | RESISTOR-CARBON FILM | 6.8Kohm 1/5W J T         |
| R258     | RCFT-E682J-000 | RESISTOR-CARBON FILM | 6.8Kohm 1/5W J T         |
| R259     | RCFT-E243J-000 | RESISTOR-CARBON FILM | 24Kohm 1/5W J T          |
| R260     | RCFT-E243J-000 | RESISTOR-CARBON FILM | 24Kohm 1/5W J T          |
| R261     | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T           |
| R262     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R263     | RCFT-E150J-000 | RESISTOR-CARBON FILM | 15ohm 1/5W J T           |

| Ref. No. | Part No.       | Description          |                          |
|----------|----------------|----------------------|--------------------------|
| R264     | RCFT-E751J-000 | RESISTOR-CARBON FILM | 750ohm 1/5W J T          |
| R265     | RCFT-E150J-000 | RESISTOR-CARBON FILM | 15ohm 1/5W J T           |
| R266     | RCFT-E751J-000 | RESISTOR-CARBON FILM | 750ohm 1/5W J T          |
| R267     | RCFT-E680J-000 | RESISTOR-CARBON FILM | 68ohm 1/5W J T           |
| R268     | RCFT-E681J-000 | RESISTOR-CARBON FILM | 680ohm 1/5W J T          |
| R269     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R270     | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T          |
| R271     | RCFT-E151J-000 | RESISTOR-CARBON FILM | 150ohm 1/5W J T          |
| R272     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T         |
| R273     | RCFT-E333J-000 | RESISTOR-CARBON FILM | 33Kohm 1/5W J T          |
| R274     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R275     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R276     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R277     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R278     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R279     | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T          |
| R280     | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T         |
| R281     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T          |
| R282     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T          |
| R283     | RCFT-E122J-000 | RESISTOR-CARBON FILM | 1.2Kohm 1/5W J T         |
| R284     | RCFT-E821J-000 | RESISTOR-CARBON FILM | 820ohm 1/5W J T          |
| R285     | RCFT-E821J-000 | RESISTOR-CARBON FILM | 820ohm 1/5W J T          |
| R286     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R287     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| R288     | RMOR-H470J-0C0 | RESISTOR-METAL OXIDE | 47ohm 1W J ERG(X)1SJ470E |
| R289     | RMOR-H470J-0C0 | RESISTOR-METAL OXIDE | 47ohm 1W J ERG(X)1SJ470E |
| R290     | RCFT-E820J-000 | RESISTOR-CARBON FILM | 82ohm 1/5W J T           |
| ▲R291    | RMFS-LR27J-0J0 | RESISTOR-METAL PLATE | 0.27ohm 5W J MPR-55R     |
| R292     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R293     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R294     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R295     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 39ohm 1/5W J T           |
| R296     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T         |
| R297     | RCFT-E202J-000 | RESISTOR-CARBON FILM | 2Kohm 1/5W J T           |
| R298     | RCFT-E911J-000 | RESISTOR-CARBON FILM | 910ohm 1/5W J T          |
| R299     | RCFT-E682J-000 | RESISTOR-CARBON FILM | 6.8Kohm 1/5W J T         |
| R300     | RCFT-E243J-000 | RESISTOR-CARBON FILM | 24Kohm 1/5W J T          |
| R301     | RCFT-E334J-000 | RESISTOR-CARBON FILM | 330Kohm 1/5W J T         |

## 2-1. INPUT &amp; PRO-LOGIC P.C. BOARD

## TRANSISTORS

|      |                |                     |                        |
|------|----------------|---------------------|------------------------|
| Q401 | TRTC-01700-SD0 | TRANSISTOR N-H FREQ | KRC107M W/RESIST TO92M |
| Q402 | TRTA-00940-SD0 | TRANSISTOR P-H FREQ | KRA107M W/RESIST TO92M |
| Q403 | TRTC-01700-SD0 | TRANSISTOR N-H FREQ | KRC107M W/RESIST TO92M |
| Q404 | TRTC-0016G-SD0 | TRANSISTOR N-H FREQ | KTC3198-GR TO92        |
| Q405 | TRTC-0016G-SD0 | TRANSISTOR N-H FREQ | KTC3198-GR TO92        |

## RESISTORS

|      |                |                      |                  |
|------|----------------|----------------------|------------------|
| R401 | RCFT-E334J-000 | RESISTOR-CARBON FILM | 330Kohm 1/5W J T |
| R402 | RCFT-E243J-000 | RESISTOR-CARBON FILM | 24Kohm 1/5W J T  |
| R403 | RCFT-E243J-000 | RESISTOR-CARBON FILM | 24Kohm 1/5W J T  |
| R404 | RCFT-E513J-000 | RESISTOR-CARBON FILM | 51Kohm 1/5W J T  |
| R405 | RCFT-E513J-000 | RESISTOR-CARBON FILM | 51Kohm 1/5W J T  |
| R406 | RCFT-E512J-000 | RESISTOR-CARBON FILM | 5.1Kohm 1/5W J T |
| R407 | RCFT-E512J-000 | RESISTOR-CARBON FILM | 5.1Kohm 1/5W J T |
| R408 | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T  |
| R409 | RCFT-E105J-000 | RESISTOR-CARBON FILM | 1Mohm 1/5W J T   |
| R410 | RCFT-E225J-000 | RESISTOR-CARBON FILM | 2.2Mohm 1/5W J T |
| R411 | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T |
| R412 | RCFT-E224J-000 | RESISTOR-CARBON FILM | 220Kohm 1/5W J T |
| R413 | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T  |
| R414 | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T  |
| R415 | RCFT-E473J-000 | RESISTOR-CARBON FILM | 47Kohm 1/5W J T  |
| R416 | RCFT-E153J-000 | RESISTOR-CARBON FILM | 15Kohm 1/5W J T  |
| R417 | RCFT-E752J-000 | RESISTOR-CARBON FILM | 7.5Kohm 1/5W J T |
| R418 | RCFT-E473J-000 | RESISTOR-CARBON FILM | 47Kohm 1/5W J T  |
| R419 | RCFT-E752J-000 | RESISTOR-CARBON FILM | 7.5Kohm 1/5W J T |
| R420 | RCFT-E153J-000 | RESISTOR-CARBON FILM | 15Kohm 1/5W J T  |
| R421 | RCFT-E203J-000 | RESISTOR-CARBON FILM | 20Kohm 1/5W J T  |
| R422 | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T   |
| R423 | RCFT-E471J-000 | RESISTOR-CARBON FILM | 470ohm 1/5W J T  |
| R424 | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T   |
| R425 | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T  |
| R426 | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T   |



| Ref. No.   | Part No.       | Description          |                          |
|------------|----------------|----------------------|--------------------------|
| R503       | RCFT-E471J-000 | RESISTOR-CARBON FILM | 470ohm 1/5W J T          |
| R504       | RCFT-E471J-000 | RESISTOR-CARBON FILM | 470ohm 1/5W J T          |
| R505       | RCFT-E471J-000 | RESISTOR-CARBON FILM | 470ohm 1/5W J T          |
| R506       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T         |
| R507       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T         |
| R508       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T         |
| R509       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T         |
| R510       | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T          |
| R511       | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T          |
| R512       | RCFT-E221J-000 | RESISTOR-CARBON FILM | 220ohm 1/5W J T          |
| R513       | RCFT-E221J-000 | RESISTOR-CARBON FILM | 220ohm 1/5W J T          |
| R514       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T         |
| R515       | RCFT-E221J-000 | RESISTOR-CARBON FILM | 220ohm 1/5W J T          |
| R516       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T           |
| R517       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T           |
| R518       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T           |
| R519       | RCFT-E221J-000 | RESISTOR-CARBON FILM | 220ohm 1/5W J T          |
| R520       | RCFT-E243J-000 | RESISTOR-CARBON FILM | 24Kohm 1/5W J T          |
| R521       | RCFT-E224J-000 | RESISTOR-CARBON FILM | 220Kohm 1/5W J T         |
| R522       | RCFT-E243J-000 | RESISTOR-CARBON FILM | 24Kohm 1/5W J T          |
| R523       | RCFT-E224J-000 | RESISTOR-CARBON FILM | 220Kohm 1/5W J T         |
| R525       | RCFT-E100J-000 | RESISTOR-CARBON FILM | 10ohm 1/5W J T           |
| R526       | RCFT-E100J-000 | RESISTOR-CARBON FILM | 10ohm 1/5W J T           |
| R527       | RCFT-E241J-000 | RESISTOR-CARBON FILM | 240ohm 1/5W J T          |
| R528       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T           |
| CAPACITORS |                |                      |                          |
| C401       | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C402       | CEET-J2R2M-CIO | CAPACITOR E/ALUMINUM | 2.2uF M 50V 5x11 T       |
| C403       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C404       | CFMT-N223J-EK0 | CAPACITOR F/POLYESTR | 0.022uF J 100V 7.4x13 T  |
| C405       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR | 0.047uF J 100V 8.9x13 T  |
| C406       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR | 0.047uF J 100V 8.9x13 T  |
| C407       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C408       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C409       | CFMT-N223J-EK0 | CAPACITOR F/POLYESTR | 0.022uF J 100V 7.4x13 T  |
| C410       | CFMT-L224J-EF0 | CAPACITOR F/POLYESTR | 0.22uF J 63V 7.5x8.5 TL  |
| C411       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C412       | CFMT-L224J-EF0 | CAPACITOR F/POLYESTR | 0.22uF J 63V 7.5x8.5 TL  |
| C413       | CEET-J4R7M-CIO | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T       |
| C414       | CEET-J4R7M-CIO | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T       |
| C415       | CFMT-L224J-EF0 | CAPACITOR F/POLYESTR | 0.22uF J 63V 7.5x8.5 TL  |
| C416       | CFMT-L224J-EF0 | CAPACITOR F/POLYESTR | 0.22uF J 63V 7.5x8.5 TL  |
| C417       | CFMT-N473J-GK0 | CAPACITOR F/POLYESTR | 0.047uF J 100V 8.9x13 T  |
| C418       | CFMT-N562J-DJ0 | CAPACITOR F/POLYESTR | 0.0056uF J 100V 5.8x12 T |
| C419       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C420       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C421       | CFMT-L684J-F10 | CAPACITOR F/POLYESTR | 0.68uF J 63V 8x11.5 TL   |
| C422       | CFST-O821J-CJ0 | CAPACITOR F/STYROL   | 820PF J 125V 5.5x12 T    |
| C423       | CCAT-J471K-AAB | CAPACITOR CERAMIC    | 470PF K 50V B T          |
| C424       | CFMT-N122J-CJ0 | CAPACITOR F/POLYESTR | 0.0012uF J 100V 5.4x12 T |
| C425       | CFMT-N103J-DE0 | CAPACITOR F/POLYESTR | 0.01uF J 100V 6x7 T      |
| C424       | CFMT-N122J-CJ0 | CAPACITOR F/POLYESTR | 0.0012uF J 100V 5.4x12 T |
| C426       | CFMT-N683J-HK0 | CAPACITOR F/POLYESTR | 0.068uF J 100V 9.9x14 T  |
| C427       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C428       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C429       | CFMT-N683J-HK0 | CAPACITOR F/POLYESTR | 0.068uF J 100V 9.9x14 T  |
| C430       | CFMT-N103J-DE0 | CAPACITOR F/POLYESTR | 0.01uF J 100V 6x7 T      |
| C431       | CFMT-L105J-FJ0 | CAPACITOR F/POLYESTR | 1uF J 63V 8x12.5 TL      |
| C432       | CEET-F220M-CIO | CAPACITOR E/ALUMINUM | 22uF M 25V 5x11 T        |
| C433       | CEET-J2R2M-CIO | CAPACITOR E/ALUMINUM | 2.2uF M 50V 5x11 T       |
| C434       | CEET-J2R2M-CIO | CAPACITOR E/ALUMINUM | 2.2uF M 50V 5x11 T       |
| C435       | CEET-J2R2M-CIO | CAPACITOR E/ALUMINUM | 2.2uF M 50V 5x11 T       |
| C436       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C437       | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C438       | CEET-E221M-FIO | CAPACITOR E/ALUMINUM | 220uF M 16V 8x11.5 T     |
| C439       | CEET-F220M-CIO | CAPACITOR E/ALUMINUM | 22uF M 25V 5x11 T        |
| C440       | CFMT-N562J-DJ0 | CAPACITOR F/POLYESTR | 0.0056uF J 100V 5.8x12 T |
| C441       | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T        |
| C442       | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T        |
| C443       | CCCT-J681K-0BB | CAPACITOR CERAMIC    | 680PF K 50V B T          |
| C444       | CCCT-J681K-0BB | CAPACITOR CERAMIC    | 680PF K 50V B T          |
| C445       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C446       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C447       | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |

| Ref. No. | Part No.       | Description          |                               |
|----------|----------------|----------------------|-------------------------------|
| C448     | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T       |
| C449     | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T       |
| C450     | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T      |
| C451     | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T      |
| C452     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C453     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C455     | CCAT-J470J-AAZ | CAPACITOR CERAMIC    | 47PF J 50V SL T               |
| C456     | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T            |
| C457     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C458     | CCAT-J470J-AAZ | CAPACITOR CERAMIC    | 47PF J 50V SL T               |
| C459     | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T            |
| C460     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C463     | CEET-E101M-DI0 | CAPACITOR E/ALUMINUM | 100uF M 16V 6.3x11 T          |
| C464     | CEET-J100M-CI0 | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T             |
| C465     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T               |
| C466     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T               |
| C467     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T               |
| C468     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C469     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C470     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C471     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C473     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C474     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T              |
| C475     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T              |
| C474     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T               |
| C475     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T               |
| C476     | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T            |
| C477     | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T            |
| C478     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C479     | CCAT-J102K-AAB | CAPACITOR CERAMIC    | 1000PF K 50V B T              |
| C480     | CCAT-J102K-AAB | CAPACITOR CERAMIC    | 1000PF K 50V B T              |
| C481     | CFMT-N562J-DJ0 | CAPACITOR F/POLYESTR | 0.0056uF J 100V 5.8x12 T      |
| C482     | CFMT-N562J-DJ0 | CAPACITOR F/POLYESTR | 0.0056uF J 100V 5.8x12 T      |
| C483     | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T      |
| C484     | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T      |
| C485     | CEET-D101M-CI0 | CAPACITOR E/ALUMINUM | 100uF M 10V 5x11 T            |
| C486     | CEET-D101M-CI0 | CAPACITOR E/ALUMINUM | 100uF M 10V 5x11 T            |
| C487     | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T            |
| C488     | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T            |
| C489     | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T      |
| C490     | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T      |
| C491     | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T            |
| C492     | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T            |
| C493     | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T            |
| C494     | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T            |
| C495     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C496     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C497     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C499     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T               |
| C500     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C501     | CEET-J1R0M-CI0 | CAPACITOR E/ALUMINUM | 1.0uF M 50V 5x11 T            |
| C502     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C503     | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C504     | CCAT-J473Z-AAF | CAPACITOR CERAMIC    | 0.047uF Z 50V F T             |
| C505     | CCAT-F103Z-AAF | CAPACITOR CERAMIC    | 0.01uF Z 25V F T              |
| C506     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C507     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C508     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C509     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C510     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C511     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C512     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C513     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C514     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C515     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C516     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C517     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C518     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C519     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C520     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C521     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C522     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C523     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C524     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C525     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| C526     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |

| Ref. No.              | Part No.        | Description           |                               |
|-----------------------|-----------------|-----------------------|-------------------------------|
| C527                  | CCTT-J101J-0CZ  | CAPACITOR CERAMIC     | 100PF J 50V SL T "AVR18 ONLY" |
| C528                  | CCTT-J101J-0CZ  | CAPACITOR CERAMIC     | 100PF J 50V SL T "AVR18 ONLY" |
| C529                  | CCTT-J101J-0CZ  | CAPACITOR CERAMIC     | 100PF J 50V SL T "AVR18 ONLY" |
| C530                  | CCTT-J101J-0CZ  | CAPACITOR CERAMIC     | 100PF J 50V SL T "AVR18 ONLY" |
| C531                  | CCTT-J101J-0CZ  | CAPACITOR CERAMIC     | 100PF J 50V SL T "AVR18 ONLY" |
| C532                  | CCTT-J101J-0CZ  | CAPACITOR CERAMIC     | 100PF J 50V SL T "AVR18 ONLY" |
| C533                  | CCTT-J101J-0CZ  | CAPACITOR CERAMIC     | 100PF J 50V SL T "AVR18 ONLY" |
| C534                  | CEET-J4R7M-CIO  | CAPACITOR E/ALUMINUM  | 4.7uF M 50V 5x11 T            |
| C535                  | CEET-J4R7M-CIO  | CAPACITOR E/ALUMINUM  | 4.7uF M 50V 5x11 T            |
| C536                  | CEET-J4R7M-CIO  | CAPACITOR E/ALUMINUM  | 4.7uF M 50V 5x11 T            |
| C537                  | CEET-J4R7M-CIO  | CAPACITOR E/ALUMINUM  | 4.7uF M 50V 5x11 T            |
| C538                  | CEET-F470M-CIO  | CAPACITOR E/ALUMINUM  | 47uF M 25V 5x11 T             |
| C539                  | CEET-F470M-CIO  | CAPACITOR E/ALUMINUM  | 47uF M 25V 5x11 T             |
| C540                  | CEET-J1R0M-CIO  | CAPACITOR E/ALUMINUM  | 1.0uF M 50V 5x11 T            |
| C541                  | CEET-F470M-CIO  | CAPACITOR E/ALUMINUM  | 47uF M 25V 5x11 T             |
| C542                  | CEET-F470M-CIO  | CAPACITOR E/ALUMINUM  | 47uF M 25V 5x11 T             |
| C543                  | CCAT-J101K-AAB  | CAPACITOR CERAMIC     | 100PF K 50V B T               |
| C545                  | CCAT-J104Z-AAF  | CAPACITOR CERAMIC     | 0.1uF Z 50V F T               |
| C546                  | CCAT-J104Z-AAF  | CAPACITOR CERAMIC     | 0.1uF Z 50V F T               |
| C547                  | CCAT-F103Z-AAF  | CAPACITOR CERAMIC     | 0.01uF Z 25V F T              |
| C548                  | CCAT-J104Z-AAF  | CAPACITOR CERAMIC     | 0.1uF Z 50V F T               |
| C549                  | CCAT-J104Z-AAF  | CAPACITOR CERAMIC     | 0.1uF Z 50V F T               |
| C550                  | CCAT-J104Z-AAF  | CAPACITOR CERAMIC     | 0.1uF Z 50V F T               |
| C551                  | CEET-J1R0M-CIO  | CAPACITOR E/ALUMINUM  | 1.0uF M 50V 5x11 T            |
|                       |                 |                       |                               |
| D401                  | DDTS-00070-SO0  | DIODES                |                               |
| D402                  | DDTS-00070-SO0  | DIODE-SI              | 1SS133 (40V 0.11A) DO-40 T    |
| D403                  | DDTZ-G056B-SOS  | DIODE-SI              | 1SS133 (40V 0.11A) DO-40 T    |
| D404                  | DDTZ-G100B-SO0  | DIODE ZENER           | MTZJ5.6B 5.45-5.73 DO34 T     |
| D405                  | DDTS-00070-SO0  | DIODE ZENER           | MTZ10B 9.41-9.90 DO40 T       |
| D406                  | DDTS-00070-SO0  | DIODE-SI              | 1SS133 (40V 0.11A) DO-40 T    |
| D406                  | DDTS-00070-SO0  | DIODE-SI              | 1SS133 (40V 0.11A) DO-40 T    |
|                       |                 |                       |                               |
| IC401                 | ICOP-00432-SG0  | INTEGRATED CIRCUITS   |                               |
| IC402                 | ICDG-00260-S10  | IC OP AMP             | NJM2068DD DIP8                |
| IC403                 | ICDG-00260-S10  | IC FUNCTION SELECTOR  | LC7821 DIP30S                 |
| IC404                 | ICOP-00134-SG0  | IC FUNCTION SELECTOR  | LC7821 DIP30S                 |
| IC405                 | ICOP-00134-SG0  | IC DUAL OP AMP        | NJM4558M SOP8                 |
| IC406                 | ICLN-03690-S10  | IC DUAL OP AMP        | NJM4558M SOP8                 |
| IC407                 | ICLN-03310-SG0  | IC BIPOLAR SWITCH     | LC4966 DIP14                  |
| IC408                 | ICOP-00134-SG0  | IC DOLBY              | NJW-1103F QFP80               |
| IC408                 | ICOP-00134-SG0  | IC DUAL OP AMP        | NJM4558M SOP8                 |
|                       |                 |                       |                               |
| CN401                 | KNCW-01510-BS9  | CONNECTORS            |                               |
| CN402                 | KNCW-01510-CS9  | CONNECTOR-WAFER       | 35237-1110 2M/M 11P           |
| CN403                 | KNCW-00240-3T9  | CONNECTOR-WAFER       | 35237-1210 2M/M 12PIN         |
| CN404                 | KNCW-00240-3T9  | CONNECTOR-WAFER       | 53014-03 2.0mm WHT            |
| CN404                 | KNCW-00240-3T9  | CONNECTOR-WAFER       | 53014-03 2.0mm WHT            |
|                       |                 |                       |                               |
| L401                  | KI0T-4470K-003  | MISCELLANEOUS         |                               |
| L402                  | KI0T-4470K-003  | COIL-INDUCTOR         | 47uH K LAL02 T "AVR18 ONLY"   |
| X401                  | KTRE-00091-040  | COIL-INDUCTOR         | 47uH K LAL02 T "AVR18 ONLY"   |
| JK401                 | SKRC-00400-041  | RESONATOR             | CST4.00MGW-TF01 T05           |
| JK402                 | SKRC-00420-061  | SOCKET-RCA            | JK0400450N                    |
| JK403                 | SKRC-00420-061  | SOCKET-RCA            | JK0600460N                    |
| PCB                   | PCSR-04800-11B  | SOCKET-RCA            | JK0600460N                    |
| PCB                   | PCSR-04800-11B  | PCB-INPUT & PRO LOGIC | A1R-480                       |
|                       |                 |                       |                               |
| 2-2. VIDEO P.C. BOARD |                 |                       |                               |
| CN901                 | KNCW-01510-9S9  | CONNECTORS            |                               |
| CN902                 | KNCW-00240-2T9  | CONNECTOR-WAFER       | 35237-0910 2M/M 9P            |
| CN902                 | KNCW-00240-2T9  | CONNECTOR-WAFER       | 53014-02 2.0mm WHT            |
|                       |                 |                       |                               |
| C901                  | CEET-F330M-CIO  | CAPACITORS            |                               |
| C902                  | CEET-D47. A-FI1 | CAPACITOR E/ALUMINUM  | 33uF M 25V 5x11 T             |
| C903                  | CEET-F330M-CIO  | CAPACITOR E/ALUMINUM  | 470uF M 10V 8x11.5 U T        |
| C904                  | CEET-F330M-CIO  | CAPACITOR E/ALUMINUM  | 33uF M 25V 5x11 T             |
| C905                  | CEET-D471M-FI1  | CAPACITOR E/ALUMINUM  | 33uF M 25V 5x11 T             |
| C907                  | CEET-D471M-FI1  | CAPACITOR E/ALUMINUM  | 470uF M 10V 8x11.5 U T        |
| C907                  | CEET-D471M-FI1  | CAPACITOR E/ALUMINUM  | 470uF M 10V 8x11.5 U T        |

| Ref. No.                   | Part No.       | Description          |                            |
|----------------------------|----------------|----------------------|----------------------------|
| C908                       | CCCT-J104Z-OFF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T            |
| C909                       | CCCT-J104Z-OFF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T            |
| C910                       | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T            |
|                            | CCAT-J120J-AAC | CAPACITOR CERAMIC    | 12PF J 50V C T             |
| <b>INTEGRATED CIRCUITS</b> |                |                      |                            |
| IC901                      | ICLN-03650-SB0 | IC VIDEO S/W         | BA7625 DIP16               |
| <b>RESISTORS</b>           |                |                      |                            |
| R901                       | RCFT-E750J-000 | RESISTOR-CARBON FILM | 75ohm 1/5W J T             |
| R902                       | RCFT-E750J-000 | RESISTOR-CARBON FILM | 75ohm 1/5W J T             |
| R903                       | RCFT-E101J-000 | RESISTOR-CARBON FILM | 100ohm 1/5W J T            |
| R904                       | RCFT-E101J-000 | RESISTOR-CARBON FILM | 100ohm 1/5W J T            |
| R905                       | RCFT-E750J-000 | RESISTOR-CARBON FILM | 75ohm 1/5W J T             |
| R906                       | RCFT-E750J-000 | RESISTOR-CARBON FILM | 75ohm 1/5W J T             |
| R907                       | RCFT-E750J-000 | RESISTOR-CARBON FILM | 75ohm 1/5W J T             |
| R908                       | RCFT-E101J-000 | RESISTOR-CARBON FILM | 100ohm 1/5W J T            |
| R909                       | RCFT-E101J-000 | RESISTOR-CARBON FILM | 100ohm 1/5W J T            |
| R910                       | RCFT-E3R3J-000 | RESISTOR-CARBON FILM | 3.3ohm 1/5W J T            |
| R911                       | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T            |
| <b>DIODES</b>              |                |                      |                            |
| D901                       | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D902                       | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D903                       | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| D904                       | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T |
| <b>MISCELLANEOUS</b>       |                |                      |                            |
| JK901                      | SKRC-00470-031 | SOCKET-RCA           | JC0300125N 3P              |
| JK902                      | SKRC-00680-021 | PIN JACK             | JC0200095N 2P              |
| PCB                        | PCSR-04800-11B | PCB-VIDEO            | A1R-480C                   |
| <b>TRANSISTORS</b>         |                |                      |                            |
| Q901                       | TRTA-0008Y-SD0 | TRANSISTOR P-H FREQ  | KTA1266-Y T092             |
| Q902                       | TRTA-0008Y-SD0 | TRANSISTOR P-H FREQ  | KTA1266-Y T092             |

## 3. PREOUT P.C.BOARD

|                   |                |                      |                          |
|-------------------|----------------|----------------------|--------------------------|
| <b>CAPACITORS</b> |                |                      |                          |
| C801              | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C802              | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C803              | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T |
| C804              | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T |
| C805              | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C806              | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C807              | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T       |
| C808              | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T       |
| C809              | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C810              | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C811              | CEET-J100M-CI0 | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T        |
| C812              | CEET-J100M-CI0 | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T        |
| C813              | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C814              | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C815              | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T |
| C816              | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T |
| C817              | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C818              | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C819              | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T       |
| C820              | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T       |
| C821              | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C822              | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C823              | CEET-J100M-CI0 | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T        |
| C824              | CEET-J100M-CI0 | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T        |
| C825              | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C826              | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C827              | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T |
| C828              | CFMT-N152J-CJ0 | CAPACITOR F/POLYESTR | 0.0015uF J 100V 5.4x12 T |
| C829              | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C830              | CFMT-N104J-JK0 | CAPACITOR F/POLYESTR | 0.10uF J 100V 12.1x14 T  |
| C831              | CEET-J4R7M-CI0 | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T       |



| Ref. No. | Part No.       | Description          |        |            |   |              |
|----------|----------------|----------------------|--------|------------|---|--------------|
| C832     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C833     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C834     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C835     | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF   | M 50V 5x11 | T |              |
| C836     | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF   | M 50V 5x11 | T |              |
| C837     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C838     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C839     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |
| C840     | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF   | M 50V 5x11 | T |              |
| C841     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C842     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C843     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C844     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |
| C845     | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF   | M 50V 5x11 | T |              |
| C846     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C847     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C848     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |
| C849     | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF   | M 50V 5x11 | T |              |
| C850     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C851     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C852     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C853     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |
| C854     | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF   | M 50V 5x11 | T |              |
| C855     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C856     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C857     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |
| C858     | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF   | M 50V 5x11 | T |              |
| C859     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C860     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C861     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C862     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |
| C863     | CEET-J100M-C10 | CAPACITOR E/ALUMINUM | 10uF   | M 50V 5x11 | T |              |
| C864     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C865     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C866     | CCAT-F103Z-AAF | CAPACITOR CERAMIC    | 0.01uF | Z 25V F T  | T |              |
| C867     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C868     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C869     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C888     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C889     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C890     | CEET-J1R0M-C10 | CAPACITOR E/ALUMINUM | 1.0uF  | M 50V 5x11 | T |              |
| C891     | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF  | Z 50V F T  | T |              |
| C893     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C894     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C895     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C896     | CCAT-J101K-AAE | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C897     | CCAT-J470J-AAZ | CAPACITOR CERAMIC    | 47PF   | J 50V SL T | T |              |
| C898     | CCAT-J470J-AAZ | CAPACITOR CERAMIC    | 47PF   | J 50V SL T | T |              |
| C899     | CCAT-J470J-AAZ | CAPACITOR CERAMIC    | 47PF   | J 50V SL T | T |              |
| C900     | CCAT-J470J-AAZ | CAPACITOR CERAMIC    | 47PF   | J 50V SL T | T |              |
| C901     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C902     | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C903     | CCAT-J101K-AAE | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C904     | CCAT-J101K-AAE | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C905     | CCAT-J101K-AAE | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C906     | CCAT-J101K-AAE | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C911     | CCCT-J104Z-0FF | CAPACITOR CERAMIC    | 0.1uF  | Z 50V F T  | T |              |
| C913     | CCAT-J101K-AAE | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C914     | CCAT-J101K-AAE | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C915     | CCAT-J101K-AAE | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C916     | CCAT-J101K-AAE | CAPACITOR CERAMIC    | 100PF  | K 50V B T  | T |              |
| C917     | CCAT-F103Z-AAF | CAPACITOR CERAMIC    | 0.01uF | Z 25V F T  | T |              |
| C918     | CCAT-F103Z-AAF | CAPACITOR CERAMIC    | 0.01uF | Z 25V F T  | T |              |
| C919     | CCAT-F103Z-AAF | CAPACITOR CERAMIC    | 0.01uF | Z 25V F T  | T |              |
| C920     | CCAT-F103Z-AAF | CAPACITOR CERAMIC    | 0.01uF | Z 25V F T  | T |              |
| C921     | CCAT-F103Z-AAF | CAPACITOR CERAMIC    | 0.01uF | Z 25V F T  | T |              |
| C922     | CCAT-F103Z-AAF | CAPACITOR CERAMIC    | 0.01uF | Z 25V F T  | T |              |
| C924     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C925     | CEET-J4R7M-C10 | CAPACITOR E/ALUMINUM | 4.7uF  | M 50V 5x11 | T |              |
| C926     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C927     | CEET-F470M-C10 | CAPACITOR E/ALUMINUM | 47uF   | M 25V 5x11 | T |              |
| C928     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |
| C929     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |
| C930     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |
| C931     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |
| C932     | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF  | J 50V SL T | T | "AVR18 ONLY" |

| Ref. No.                   | Part No.       | Description          |                               |
|----------------------------|----------------|----------------------|-------------------------------|
| C933                       | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T "AVR18 ONLY" |
| <b>DIODES</b>              |                |                      |                               |
| D801                       | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T    |
| <b>INTEGRATED CIRCUITS</b> |                |                      |                               |
| IC801                      | ICOP-00134-SG0 | IC DUAL OP AMP       | NJM4558M SOP8                 |
| IC802                      | ICOP-00134-SG0 | IC DUAL OP AMP       | NJM4558M SOP8                 |
| IC803                      | ICOP-00134-SG0 | IC DUAL OP AMP       | NJM4558M SOP8                 |
| IC804                      | ICLN-03590-S10 | IC ANALOG FUNCTION   | LC78213 DIP30                 |
| IC805                      | ICCM-01300-SD0 | IC VOLUME CONTROL IC | KIC9459F SOP24                |
| IC806                      | ICCM-01300-SD0 | IC VOLUME CONTROL IC | KIC9459F SOP24                |
| IC807                      | ICCM-01300-SD0 | IC VOLUME CONTROL IC | KIC9459F SOP24                |
| IC808                      | ICOP-00134-SG0 | IC DUAL OP AMP       | NJM4558M SOP8                 |
| IC809                      | ICOP-00134-SG0 | IC DUAL OP AMP       | NJM4558M SOP8                 |
| IC810                      | ICOP-00134-SG0 | IC DUAL OP AMP       | NJM4558M SOP8                 |
| IC811                      | ICOP-00134-SG0 | IC DUAL OP AMP       | NJM4558M SOP8                 |
| <b>CONNECTORS</b>          |                |                      |                               |
| CW803                      | KNCW-00240-8T9 | CONNECTOR-WAFER      | 53014-08 2.0mm WHT            |
| CN801                      | KNCW-01510-DS9 | CONNECTOR-WAFER      | 35237-1310 2M/M 13P           |
| CN802                      | KNCW-01510-8S9 | CONNECTOR-WAFER      | 35237-0810 2M/M 8P            |
| CW801                      | UA08-80810-250 | WIRE-ASS'Y           | 1533#28 GRY-100 10P           |
| CW805                      | U308-8S818-250 | WIRE-ASS'Y           | 2547#28 GRY-180 3P            |
| <b>MISCELLANEOUS</b>       |                |                      |                               |
| PCB                        | PCSR-04830-11B | PCB-PREOUT           | A1R-483                       |
| JK801                      | SKRC-00750-060 | SOCKET-RCA           | JK060046BN                    |
| JK802                      | SKRC-00750-060 | SOCKET-RCA           | JK060046BN                    |
| <b>RESISTORS</b>           |                |                      |                               |
| R801                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R802                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R803                       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T                |
| R804                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R805                       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T                |
| R806                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R807                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R808                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R809                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R810                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R811                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R812                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R813                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R814                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R815                       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T                |
| R816                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R817                       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T                |
| R818                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R819                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R820                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R821                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R822                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R823                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R824                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R825                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R826                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R827                       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T                |
| R828                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R829                       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T                |
| R830                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R831                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R832                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R833                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R834                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |
| R835                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R836                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R837                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R838                       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T                |
| R839                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T              |
| R840                       | RCFT-E470J-000 | RESISTOR-CARBON FILM | 47ohm 1/5W J T                |



| Ref. No. | Part No.       | Description         |                        |
|----------|----------------|---------------------|------------------------|
|          |                | <b>TRANSISTORS</b>  |                        |
| Q801     | TRTD-00200-SD0 | TRANSISTOR N-L FREQ | KTD-1302 TO92          |
| Q802     | TRTD-00200-SD0 | TRANSISTOR N-L FREQ | KTD-1302 TO92          |
| Q803     | TRTA-00940-SD0 | TRANSISTOR P-H FREQ | KRA107M W/RESIST TO92M |
| Q804     | TRTD-00200-SD0 | TRANSISTOR N-L FREQ | KTD-1302 TO92          |
| Q805     | TRTD-00200-SD0 | TRANSISTOR N-L FREQ | KTD-1302 TO92          |
| Q806     | TRTA-00940-SD0 | TRANSISTOR P-H FREQ | KRA107M W/RESIST TO92M |
| Q807     | TRTD-00200-SD0 | TRANSISTOR N-L FREQ | KTD-1302 TO92          |
| Q808     | TRTD-00200-SD0 | TRANSISTOR N-L FREQ | KTD-1302 TO92          |
| Q809     | TRTA-00940-SD0 | TRANSISTOR P-H FREQ | KRA107M W/RESIST TO92M |
| Q810     | TRTA-00940-SD0 | TRANSISTOR P-H FREQ | KRA107M W/RESIST TO92M |
| Q811     | TRTC-01700-SD0 | TRANSISTOR N-H FREQ | KRC107M W/RESIST TO92M |
| Q812     | TRTC-01700-SD0 | TRANSISTOR N-H FREQ | KRC107M W/RESIST TO92M |
| Q813     | TRTC-01700-SD0 | TRANSISTOR N-H FREQ | KRC107M W/RESIST TO92M |
| Q814     | TRTC-01700-SD0 | TRANSISTOR N-H FREQ | KRC107M W/RESIST TO92M |

## 4. FRONT P.C. BOARD

|       |                |               |                            |
|-------|----------------|---------------|----------------------------|
|       |                | <b>DIODES</b> |                            |
| D701  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D702  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D703  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D704  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D705  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D706  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D707  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D708  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D709  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D710  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D711  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D712  | DDTZ-G075B-SO0 | DIODE ZENER   | MTZ7.5B 7.07-7.45 DO40 T   |
| D714  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D715  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| D716  | DDTS-00070-SO0 | DIODE-SI      | 1SS133 (40V 0.11A) DO-40 T |
| LD705 | DPLE-00201-RR0 | DISPLAY-LED   | SR3511 RED 5mm TAPPING     |
| LD706 | DPLE-00201-RR0 | DISPLAY-LED   | SR3511 RED 5mm TAPPING     |

|      |                |                      |                  |
|------|----------------|----------------------|------------------|
|      |                | <b>RESISTORS</b>     |                  |
| R701 | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T |
| R702 | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T |
| R703 | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T |
| R704 | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T |
| R705 | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T  |
| R706 | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T |
| R712 | RCFT-E271J-000 | RESISTOR-CARBON FILM | 270ohm 1/5W J T  |
| R713 | RCFT-E271J-000 | RESISTOR-CARBON FILM | 270ohm 1/5W J T  |
| R716 | RCFT-E271J-000 | RESISTOR-CARBON FILM | 270ohm 1/5W J T  |
| R717 | RCFT-E271J-000 | RESISTOR-CARBON FILM | 270ohm 1/5W J T  |
| R719 | RCFT-E331J-000 | RESISTOR-CARBON FILM | 330ohm 1/5W J T  |
| R720 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R721 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R722 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R723 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R725 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R726 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R727 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R728 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R729 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R730 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R731 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R732 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R733 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R734 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R735 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R736 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R737 | RCFT-F272J-010 | RESISTOR-CARBON FILM | 2.7Kohm 1/4W J T |
| R739 | RCFT-E473J-000 | RESISTOR-CARBON FILM | 47Kohm 1/5W J T  |
| R740 | RCFT-E473J-000 | RESISTOR-CARBON FILM | 47Kohm 1/5W J T  |
| R746 | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T  |
| R747 | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T  |
| R748 | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T  |
| R751 | RCFT-F223J-010 | RESISTOR-CARBON FILM | 22Kohm 1/4W J T  |
| R752 | RCFT-F223J-010 | RESISTOR-CARBON FILM | 22Kohm 1/4W J T  |

"AVR 18 ONLY"

"AVR 5 ONLY"

| Ref. No.                   | Part No.       | Description          |                               |
|----------------------------|----------------|----------------------|-------------------------------|
| R753                       | RCFT-F223J-010 | RESISTOR-CARBON FILM | 22Kohm 1/4W J T               |
| R754                       | RCFT-E473J-000 | RESISTOR-CARBON FILM | 47Kohm 1/5W J T "AVR 5 ONLY"  |
| R755                       | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T               |
| R756                       | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T "AVR 18 ONLY" |
| <b>INTEGRATED CIRCUITS</b> |                |                      |                               |
| IC701                      | ICMP-03100-S20 | IC MICOM             | UPD780204GF-049-3BA QFP100    |
| IC702                      | ICOP-00210-SD0 | IC RESET             | KIA7042P/F 4.2V TO-92         |
| IC703                      | ICHY-00221-U60 | IC REMOTE RECEIVER   | TSOP1238TB1                   |
| IC704                      | ICCM-00231-SR0 | IC 2K CMOS EEPROM    | M24C02-BN6 DIP8               |
| <b>MISCELLANEOUS</b>       |                |                      |                               |
| X701                       | KTRE-00170-042 | RESONATOR            | CST4.19MGW 4.19MHz            |
| FL701                      | MRAG-13020-004 | CUSHION-A            | EVA(VE-45),10X25X6T           |
| PCB                        | DPFL-00630-00P | DISPLAY-FLUORESCENT  | CM1530C                       |
| SW703                      | PCSR-04810-11B | PCB-FRONT            | A1R-481A                      |
| SW705                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW706                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW707                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW708                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW709                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW710                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW711                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW712                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW713                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW714                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW715                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW716                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW717                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW718                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW719                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW720                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW721                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW722                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW723                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW724                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW725                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW727                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW728                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW729                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW730                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW731                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| SW732                      | SWTA-00220-060 | SWITCH-TACT          | SKHV10910(A) 12V 50mA         |
| <b>TRANSISTORS</b>         |                |                      |                               |
| Q704                       | TRTC-01700-SD0 | TRANSISTOR N-H FREQ  | KRC107M W/RESIST TO92M        |
| Q705                       | TRTC-01700-SD0 | TRANSISTOR N-H FREQ  | KRC107M W/RESIST TO92M        |
| Q706                       | TRTC-01700-SD0 | TRANSISTOR N-H FREQ  | KRC107M W/RESIST TO92M        |
| Q707                       | TRTC-01700-SD0 | TRANSISTOR N-H FREQ  | KRC107M W/RESIST TO92M        |
| Q708                       | TRTC-01700-SD0 | TRANSISTOR N-H FREQ  | KRC107M W/RESIST TO92M        |
| Q710                       | TRTC-0016G-SD0 | TRANSISTOR N-H FREQ  | KTC3198-GR TO92               |
| <b>CONNECTORS</b>          |                |                      |                               |
| CW701                      | U810-7M744-200 | WIRE-ASS'Y           | UL1007#26 VIT-440 8P          |
| CW702                      | U308-8S810-250 | WIRE-ASS'Y           | 2547#28 GRY-100 10P           |
| CW704                      | U508-4M710-250 | WIRE-ASS'Y           | 1007#26 YEL-100 5P            |
| CN701                      | KNCW-06380-35S | CONNECTOR-WAFER      | GF120-35S-TS 1.25mm S         |
| CN702                      | KNCW-00160-5S9 | CONNECTOR-WAFER      | 53015-0510 2mm-WHT            |
| <b>CAPACITORS</b>          |                |                      |                               |
| C703                       | CCCT-J103Z-0DF | CAPACITOR CERAMIC    | 0.01uF Z 50V F T              |
| C704                       | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T               |
| C705                       | CEET-J100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 50V 5x11 T             |
| C706                       | CEGS-B104Z-BKO | CAPACITOR E/DO LAYER | 0.1F Z 5.5V EECS5R5V104       |
| C707                       | CEET-D101M-CIO | CAPACITOR E/ALUMINUM | 100uF M 10V 5x11 T            |
| C708                       | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T             |
| C709                       | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T               |
| C710                       | CCTT-J101J-0CZ | CAPACITOR CERAMIC    | 100PF J 50V SL T              |

| Ref. No. | Part No.       | Description          |                     |
|----------|----------------|----------------------|---------------------|
| C711     | CCAT-J473Z-AAF | CAPACITOR CERAMIC    | 0.047uF Z 50V F T   |
| C712     | CCAT-J473Z-AAF | CAPACITOR CERAMIC    | 0.047uF Z 50V F T   |
| C713     | CEET-J470M-DIO | CAPACITOR E/ALUMINUM | 47uF M 50V 6.3x11 T |
| C714     | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T     |
| C715     | CEET-J1R0M-CIO | CAPACITOR E/ALUMINUM | 1.0uF M 50V 5x11 T  |
| C716     | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T     |
| C752     | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T     |
| C760     | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T     |
| C761     | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T     |
| C762     | CCAT-F223Z-AAF | CAPACITOR CERAMIC    | 0.022uF Z 25V F T   |

## 4-1. TUNER P.C. BOARD

| CAPACITORS |                |                      |                          |
|------------|----------------|----------------------|--------------------------|
| C601       | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C602       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C604       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C605       | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C606       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C607       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C608       | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C609       | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C611       | CCCT-J473Z-OJF | CAPACITOR CERAMIC    | 0.047uF Z 50V F T        |
| C613       | CCTT-J150J-0BC | CAPACITOR CERAMIC    | 15PF J 50V CH T          |
| C614       | CFST-O471J-CJO | CAPACITOR F/STYROL   | 470PF J 125V 5.5x12 T    |
| C615       | CEET-G100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 35V 5x11 T        |
| C616       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C617       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C618       | CEET-J4R7M-CIO | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T       |
| C619       | CEET-J4R7M-CIO | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T       |
| C620       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C621       | CFMT-N223J-EK0 | CAPACITOR F/POLYESTR | 0.022uF J 100V 7.4x13 T  |
| C622       | CEET-J3R3M-CIO | CAPACITOR E/ALUMINUM | 3.3uF M 50V 5x11 T       |
| C623       | CFMT-N332J-DJO | CAPACITOR F/POLYESTR | 0.0033uF J 100V 5.8x12 T |
| C624       | CFMT-N393J-FK0 | CAPACITOR F/POLYESTR | 0.039uF J 100V 8.5x13 T  |
| C625       | CCCT-J103Z-ODF | CAPACITOR CERAMIC    | 0.01uF Z 50V F T         |
| C626       | CEET-J1R0M-CIO | CAPACITOR E/ALUMINUM | 1.0uF M 50V 5x11 T       |
| C627       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C628       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C629       | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C630       | CCCT-J473Z-OJF | CAPACITOR CERAMIC    | 0.047uF Z 50V F T        |
| C631       | CCTT-J331J-OFZ | CAPACITOR CERAMIC    | 330PF J 50V SL T         |
| C632       | CCTT-J101J-OCZ | CAPACITOR CERAMIC    | 100PF J 50V SL T         |
| C633       | CCTT-J820J-0BZ | CAPACITOR CERAMIC    | 82PF J 50V SL T          |
| C634       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C635       | CCCT-J103Z-ODF | CAPACITOR CERAMIC    | 0.01uF Z 50V F T         |
| C636       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C637       | CCTT-J390J-ODC | CAPACITOR CERAMIC    | 39PF J 50V CH T          |
| C638       | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C639       | CCTT-J390J-ODC | CAPACITOR CERAMIC    | 39PF J 50V CH T          |
| C640       | CEET-JR47M-CIO | CAPACITOR E/ALUMINUM | 0.47uF M 50V 5x11 T      |
| C642       | CEET-F470M-CIO | CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
| C643       | CCCT-J223Z-OFF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T        |
| C644       | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C645       | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C646       | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C647       | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T          |
| C649       | CEET-G100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 35V 5x11 T        |
| C650       | CEET-G100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 35V 5x11 T        |
| C651       | CEET-G100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 35V 5x11 T        |
| C652       | CCAT-J680J-AAZ | CAPACITOR CERAMIC    | 68PF J 50V SL T          |
| C652       | CCAT-J100J-AAZ | CAPACITOR CERAMIC    | 10PF J 50V SL T          |
| C653       | CCAT-J680J-AAZ | CAPACITOR CERAMIC    | 68PF J 50V SL T          |
| C653       | CCAT-J100J-AAZ | CAPACITOR CERAMIC    | 10PF J 50V SL T          |
| C654       | CCAT-J561K-AAB | CAPACITOR CERAMIC    | 560PF K 50V B T          |
| C654       | CCAT-J221K-AAB | CAPACITOR CERAMIC    | 220PF K 50V B T          |
| C655       | CCAT-J561K-AAB | CAPACITOR CERAMIC    | 560PF K 50V B T          |
| C655       | CCAT-J221K-AAB | CAPACITOR CERAMIC    | 220PF K 50V B T          |
| C656       | CEET-G100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 35V 5x11 T        |
| C657       | CCTT-J681J-0BZ | CAPACITOR CERAMIC    | 680PF J 50V SL T         |
| C658       | CEET-J4R7M-CIO | CAPACITOR E/ALUMINUM | 4.7uF M 50V 5x11 T       |
| C659       | CEET-G100M-CIO | CAPACITOR E/ALUMINUM | 10uF M 35V 5x11 T        |
| C660       | CCAT-J473Z-AAF | CAPACITOR CERAMIC    | 0.047uF Z 50V F T        |
| C661       | CEET-E101M-DIO | CAPACITOR E/ALUMINUM | 100uF M 16V 6.3x11 T     |
| C662       | CEET-J1R0M-CIO | CAPACITOR E/ALUMINUM | 1.0uF M 50V 5x11 T       |

"AVR 18 ONLY"  
"AVR 18 ONLY"

| Ref. No.                   | Part No.       | Description          |   |
|----------------------------|----------------|----------------------|---|
| C663                       | CEET-JR22M-CIO | CAPACITOR E/ALUMINUM | 0.22uF M 50V 5x11 T                         |
| C664                       | CEET-J1R0M-CIO | CAPACITOR E/ALUMINUM | 1.0uF M 50V 5x11 T                          |
| C665                       | CCCT-J223Z-0FF | CAPACITOR CERAMIC    | 0.022uF Z 50V F T                           |
| C675                       | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T                             |
| C676                       | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T                             |
| C677                       | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T                             |
| <b>DIODES</b>              |                |                      |   |
| VD601                      | DDSV-00120-S10 | DIODE-VVC            | SVC321SPA-C2 AM8V DO40S                     |
| VD602                      | DDSV-00120-S10 | DIODE-VVC            | SVC321SPA-C2 AM8V DO40S                     |
| D602                       | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T                  |
| ZD601                      | DDTZ-G051B-SOS | DIODE ZENER          | MTZJ5.1B 4.94-5.20 DO34 T                   |
| <b>INTEGRATED CIRCUITS</b> |                |                      |   |
| IC601                      | ICLN-03620-S10 | IC AM/FM IF          | LA1266 DIP24                                |
| IC602                      | ICLN-03680-S10 | IC PLL               | LC7218JM SOP-24                             |
| IC603                      | ICLN-03610-S10 | IC PLL FM MPX        | LA3401 DIP22                                |
| IC604                      | ICLN-03630-SR0 | IC RDS DEMODULATOR   | TDA7479D SOP16 "AVR 18 ONLY"                |
| <b>COILS</b>               |                |                      |   |
| T601                       | KIAT-00530-E20 | COIL-AM ANT          | AAT053 MW 7mm - CAN                         |
| T602                       | KIAO-00460-E20 | COIL-AM OSC          | AAO046 MW 7mm - CAN                         |
| T603                       | KIAA-00260-E20 | COIL-AM IFT          | AAA-026 7MC-K502713N4-KR                    |
| T604                       | IFFA-00110-E20 | IFT-FM               | AFA011 7mm-CAN                              |
| T605                       | IFFD-00100-E20 | IFT-FM DET           | AFD010 7mm-CAN                              |
| T606                       | KIML-A0010-E20 | COIL-FM MPX FILTER   | AMA001 19KHz 10mm-CAN                       |
| T607                       | KIML-A0010-E20 | COIL-FM MPX FILTER   | AMA001 19KHz 10mm-CAN                       |
| L602                       | KIFK-00080-E20 | COIL-FM CHOKE        | AFK016 A187LY-K5006 20.8mH<br>"AVR 18 ONLY" |
| <b>MISCELLANEOUS</b>       |                |                      |   |
| X601                       | KTAL-00041-072 | CRYSTAL              | HC-49/U 7.200000MHz                         |
| CF605                      | KTRE-00300-288 | RESONATOR            | ZTB456F11                                   |
| PCB1                       | PCSR-04810-11B | PCB-TUNER            | A1R-481B                                    |
| CF601                      | BTBP-00140-BPM | FILTER-MICA PRINT    | GFMB-T "AVR 18 ONLY"                        |
| CF602                      | BTCE-00040-107 | FILTER-CERAMIC       | SFE10.7MS2-A-TF21 "AVR 5 ONLY"              |
| CF602                      | BTCE-00152-107 | FILTER-CERAMIC       | SFE10.7MJA10H-A-TF21 "AVR 18 ONLY"          |
| CF603                      | BTCE-00040-107 | FILTER-CERAMIC       | SFE10.7MS2-A-TF21                           |
| CF604                      | BTCE-00450-045 | FILTER-CERAMIC       | AHCFM2-450AL                                |
| ANT601                     | TEAT-00170-02S | TERMINAL ANTENNA     | SC0210393N "AVR 5 ONLY"                     |
| ANT601                     | TEAT-00160-02S | TERMINAL ANTENNA     | SC0210392N "AVR 18 ONLY"                    |
| FE601                      | TUFF-00231-00K | FRONT-END            | FTA3-509H "AVR 5 ONLY"                      |
| FE601                      | TUFF-00201-01K | FRONT-END            | FTA4-460H "AVR 18 ONLY"                     |
| <b>RESISTORS</b>           |                |                      |   |
| R273                       | RCFT-E332J-000 | RESISTOR-CARBON FILM | 3.3Kohm 1/5W J T                            |
| R601                       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T                              |
| R602                       | RCFT-E243J-000 | RESISTOR-CARBON FILM | 24Kohm 1/5W J T "AVR 18 ONLY"               |
| R603                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T "AVR 18 ONLY"              |
| R604                       | RCFT-E122J-000 | RESISTOR-CARBON FILM | 1.2Kohm 1/5W J T                            |
| R605                       | RCFT-E101J-000 | RESISTOR-CARBON FILM | 100ohm 1/5W J T                             |
| R606                       | RCFT-E332J-000 | RESISTOR-CARBON FILM | 3.3Kohm 1/5W J T                            |
| R607                       | RCFT-E561J-000 | RESISTOR-CARBON FILM | 560ohm 1/5W J T                             |
| R608                       | RCFT-E331J-000 | RESISTOR-CARBON FILM | 330ohm 1/5W J T                             |
| R609                       | RCFT-E331J-000 | RESISTOR-CARBON FILM | 330ohm 1/5W J T                             |
| R610                       | RCFT-E4R7J-000 | RESISTOR-CARBON FILM | 4.7ohm 1/5W J T                             |
| R611                       | RCFT-E271J-000 | RESISTOR-CARBON FILM | 270ohm 1/5W J T                             |
| R612                       | RCFT-E221J-000 | RESISTOR-CARBON FILM | 220ohm 1/5W J T                             |
| R613                       | RCFT-E221J-000 | RESISTOR-CARBON FILM | 220ohm 1/5W J T                             |
| R614                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T                            |
| R618                       | RCFT-E104J-000 | RESISTOR-CARBON FILM | 100Kohm 1/5W J T                            |
| R621                       | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T                            |
| R622                       | RCFT-E683J-000 | RESISTOR-CARBON FILM | 68Kohm 1/5W J T                             |
| R624                       | RCFT-E273J-000 | RESISTOR-CARBON FILM | 27Kohm 1/5W J T "AVR 5 ONLY"                |
| R624                       | RCFT-E473J-000 | RESISTOR-CARBON FILM | 47Kohm 1/5W J T "AVR 18 ONLY"               |
| R625                       | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T                              |
| R626                       | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T                            |
| R627                       | RCFT-E220J-000 | RESISTOR-CARBON FILM | 22ohm 1/5W J T                              |

| Ref. No. | Part No.       | Description          |                  |               |
|----------|----------------|----------------------|------------------|---------------|
| R628     | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T |               |
| R629     | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T |               |
| R630     | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T  |               |
| R631     | RCFT-E222J-000 | RESISTOR-CARBON FILM | 2.2Kohm 1/5W J T |               |
| R633     | RCFT-E101J-000 | RESISTOR-CARBON FILM | 100ohm 1/5W J T  |               |
| R634     | RCFT-E472J-000 | RESISTOR-CARBON FILM | 4.7Kohm 1/5W J T |               |
| R636     | RCFT-E220J-000 | RESISTOR-CARBON FILM | 22ohm 1/5W J T   |               |
| R637     | RCFT-E621J-000 | RESISTOR-CARBON FILM | 620ohm 1/5W J T  | "AVR 5 ONLY"  |
| R637     | RCFT-E390J-000 | RESISTOR-CARBON FILM | 390ohm 1/5W J T  | "AVR 18 ONLY" |
| R638     | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T  |               |
| R640     | RCFT-E101J-000 | RESISTOR-CARBON FILM | 100ohm 1/5W J T  |               |
| R641     | RCFT-E473J-000 | RESISTOR-CARBON FILM | 47Kohm 1/5W J T  |               |
| R642     | RCFT-E332J-000 | RESISTOR-CARBON FILM | 3.3Kohm 1/5W J T |               |
| R643     | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T  |               |
| R645     | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T  |               |
| R646     | RCFT-E471J-000 | RESISTOR-CARBON FILM | 470ohm 1/5W J T  |               |
| R647     | RCFT-E103J-000 | RESISTOR-CARBON FILM | 10Kohm 1/5W J T  |               |
| R648     | RCFT-E101J-000 | RESISTOR-CARBON FILM | 100ohm 1/5W J T  |               |
| R649     | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T   |               |
| R650     | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T   |               |
| R651     | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T   |               |
| R659     | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T   |               |
| R660     | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T   |               |
| R661     | RCFT-E152J-000 | RESISTOR-CARBON FILM | 1.5Kohm 1/5W J T |               |
| R662     | RCFT-E152J-000 | RESISTOR-CARBON FILM | 1.5Kohm 1/5W J T |               |
| R663     | RCFT-E272J-000 | RESISTOR-CARBON FILM | 2.7Kohm 1/5W J T |               |
| R664     | RCFT-E272J-000 | RESISTOR-CARBON FILM | 2.7Kohm 1/5W J T |               |
| R665     | RCFT-E622J-000 | RESISTOR-CARBON FILM | 6.2Kohm 1/5W J T |               |
| R666     | RCFT-E622J-000 | RESISTOR-CARBON FILM | 6.2Kohm 1/5W J T |               |
| R667     | RCFT-E184J-000 | RESISTOR-CARBON FILM | 180Kohm 1/5W J T | "AVR 5 ONLY"  |
| R667     | RCFT-E274J-000 | RESISTOR-CARBON FILM | 270Kohm 1/5W J T | "AVR 18 ONLY" |
| R668     | RCFT-E184J-000 | RESISTOR-CARBON FILM | 180Kohm 1/5W J T | "AVR 5 ONLY"  |
| R668     | RCFT-E274J-000 | RESISTOR-CARBON FILM | 270Kohm 1/5W J T | "AVR 18 ONLY" |
| R669     | RCFT-E124J-000 | RESISTOR-CARBON FILM | 120Kohm 1/5W J T | "AVR 5 ONLY"  |
| R669     | RCFT-E224J-000 | RESISTOR-CARBON FILM | 220Kohm 1/5W J T | "AVR 18 ONLY" |
| R670     | RCFT-E124J-000 | RESISTOR-CARBON FILM | 120Kohm 1/5W J T | "AVR 5 ONLY"  |
| R670     | RCFT-E224J-000 | RESISTOR-CARBON FILM | 220Kohm 1/5W J T | "AVR 18 ONLY" |
| R671     | RCFT-E473J-000 | RESISTOR-CARBON FILM | 47Kohm 1/5W J T  |               |
| R672     | RCFT-E101J-000 | RESISTOR-CARBON FILM | 100ohm 1/5W J T  |               |
| R674     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T  |               |
| R675     | RCFT-E473J-000 | RESISTOR-CARBON FILM | 47Kohm 1/5W J T  |               |
| R676     | RCFT-E223J-000 | RESISTOR-CARBON FILM | 22Kohm 1/5W J T  |               |
| R683     | RCFT-E182J-000 | RESISTOR-CARBON FILM | 1.8Kohm 1/5W J T |               |
| R684     | RCFT-E102J-000 | RESISTOR-CARBON FILM | 1Kohm 1/5W J T   |               |
| R685     | RCFT-E151J-000 | RESISTOR-CARBON FILM | 150ohm 1/5W J T  | "AVR 18 ONLY" |

#### TRANSISTORS

|      |                |                     |                        |
|------|----------------|---------------------|------------------------|
| Q601 | TRTC-0010Y-SD0 | TRANSISTOR N-H FREQ | KTC3194-Y TO92         |
| Q603 | TRTC-0016G-SD0 | TRANSISTOR N-H FREQ | KTC3198-GR TO92        |
| Q605 | TRTA-00940-SD0 | TRANSISTOR P-H FREQ | KRA107M W/RESIST TO92M |
| Q606 | TRTA-00940-SD0 | TRANSISTOR P-H FREQ | KRA107M W/RESIST TO92M |
| Q607 | TRTA-00940-SD0 | TRANSISTOR P-H FREQ | KRA107M W/RESIST TO92M |
| Q608 | TRTA-00940-SD0 | TRANSISTOR P-H FREQ | KRA107M W/RESIST TO92M |
| Q609 | TRTD-00200-SD0 | TRANSISTOR N-L FREQ | KTD-1302 TO92          |
| Q610 | TRTD-00200-SD0 | TRANSISTOR N-L FREQ | KTD-1302 TO92          |
| Q611 | TRTC-0016G-SD0 | TRANSISTOR N-H FREQ | KTC3198-GR TO92        |
| Q612 | TRTC-0016G-SD0 | TRANSISTOR N-H FREQ | KTC3198-GR TO92        |

#### CONNECTORS

|       |                |                 |                     |
|-------|----------------|-----------------|---------------------|
| TP601 | KNCW-01490-2T9 | CONNECTOR-WAFER | JE115-AT-02P        |
| TP602 | KNCW-01490-2T9 | CONNECTOR-WAFER | JE115-AT-02P        |
| TP603 | KNCW-01490-2T9 | CONNECTOR-WAFER | JE115-AT-02P        |
| CH602 | KNCW-01510-ES9 | CONNECTOR-WAFER | 35237-1410 2M/M 14P |

#### CONTROLS

|       |                |                     |                       |
|-------|----------------|---------------------|-----------------------|
| VR601 | VFEB-A021B-472 | RESISTOR-SEMI FIXED | RH0638C-4.7KB 4.7Kohm |
| VR602 | VFEB-A021B-473 | RESISTOR-SEMI FIXED | RH0638C-47KB 47Kohm   |
| VR603 | VFEB-A021B-224 | RESISTOR-SEMI FIXED | RH0638C-220KB 220Kohm |
| CT601 | VCTC-00022-200 | TRIMMER             | CVCN06C200            |



## 4-2. TONE P.C.BOARD

| VR701<br>Ref. No. | VRAE-P050C-104<br>Part No. | CONTROLS<br>VR-ROTARY<br>Description |  |
|-------------------|----------------------------|--------------------------------------|--|
| VR702             | VRAE-P050C-104             | VR-ROTARY                            | RK14K1260106-100K $\Omega$ (C)x2                                   |
| VR703             | VRAE-P049W-104             | VR-ROTARY                            | RK14K1260106-100K $\Omega$ (C)x2<br>RK11K1160106-100K $\Omega$ (W) |

| CW705<br>CH702 | UM08-80850-000<br>U1T1-01520-Z10 | CONNECTORS<br>WIRE-ASS'Y<br>WIRE-ASS'Y |  |
|----------------|----------------------------------|--|--|
|                |                                  |  | 2547#28x2,1007#26 400 GRY<br>1007#22 BLK-200 3.2pi |

| R761 | RCFT-E100J-000 | RESISTORS<br>RESISTOR-CARBON FILM | 10ohm 1/5W J T   |
|------|----------------|-----------------------------------|------------------|
| R762 | RCFT-E101J-000 | RESISTOR-CARBON FILM              | 100ohm 1/5W J T  |
| R763 | RCFT-E101J-000 | RESISTOR-CARBON FILM              | 100ohm 1/5W J T  |
| R764 | RCFT-E333J-000 | RESISTOR-CARBON FILM              | 33Kohm 1/5W J T  |
| R765 | RCFT-E561J-000 | RESISTOR-CARBON FILM              | 560ohm 1/5W J T  |
| R766 | RCFT-E104J-000 | RESISTOR-CARBON FILM              | 100Kohm 1/5W J T |
| R767 | RCFT-E105J-000 | RESISTOR-CARBON FILM              | 1Mohm 1/5W J T   |
| R769 | RCFT-E103J-000 | RESISTOR-CARBON FILM              | 10Kohm 1/5W J T  |
| R770 | RCFT-E223J-000 | RESISTOR-CARBON FILM              | 22Kohm 1/5W J T  |
| R771 | RCFT-E471J-000 | RESISTOR-CARBON FILM              | 470ohm 1/5W J T  |
| R772 | RCFT-E471J-000 | RESISTOR-CARBON FILM              | 470ohm 1/5W J T  |
| R773 | RCFT-E104J-000 | RESISTOR-CARBON FILM              | 100Kohm 1/5W J T |
| R774 | RCFT-E104J-000 | RESISTOR-CARBON FILM              | 100Kohm 1/5W J T |
| R775 | RCFT-E105J-000 | RESISTOR-CARBON FILM              | 1Mohm 1/5W J T   |
| R776 | RCFT-E105J-000 | RESISTOR-CARBON FILM              | 1Mohm 1/5W J T   |
| R777 | RCFT-E471J-000 | RESISTOR-CARBON FILM              | 470ohm 1/5W J T  |
| R778 | RCFT-E471J-000 | RESISTOR-CARBON FILM              | 470ohm 1/5W J T  |
| R779 | RCFT-E104J-000 | RESISTOR-CARBON FILM              | 100Kohm 1/5W J T |
| R780 | RCFT-E104J-000 | RESISTOR-CARBON FILM              | 100Kohm 1/5W J T |
| R781 | RCFT-E222J-000 | RESISTOR-CARBON FILM              | 2.2Kohm 1/5W J T |
| R782 | RCFT-E222J-000 | RESISTOR-CARBON FILM              | 2.2Kohm 1/5W J T |
| R783 | RCFT-E223J-000 | RESISTOR-CARBON FILM              | 22Kohm 1/5W J T  |
| R784 | RCFT-E223J-000 | RESISTOR-CARBON FILM              | 22Kohm 1/5W J T  |
| R785 | RCFT-E561J-000 | RESISTOR-CARBON FILM              | 560ohm 1/5W J T  |
| R786 | RCFT-E561J-000 | RESISTOR-CARBON FILM              | 560ohm 1/5W J T  |
| R787 | RCFT-E392J-000 | RESISTOR-CARBON FILM              | 3.9Kohm 1/5W J T |
| R788 | RCFT-E392J-000 | RESISTOR-CARBON FILM              | 3.9Kohm 1/5W J T |
| R799 | RCFT-E152J-000 | RESISTOR-CARBON FILM              | 1.5Kohm 1/5W J T |
| R800 | RCFT-E152J-000 | RESISTOR-CARBON FILM              | 1.5Kohm 1/5W J T |

| PCB | PCSR-04810-11B | MISCELLANEOUS<br>PCB-TONE | A1R-481C |
|-----|----------------|---------------------------|----------|
|-----|----------------|---------------------------|----------|

| IC705 | ICOP-03150-SG0 | INTEGRATED CIRCUITS<br>IC OP AMP | NJM2068M SOP8 |
|-------|----------------|----------------------------------|---------------|
|-------|----------------|----------------------------------|---------------|

| C731 | CEET-F470M-CI0 | CAPACITORS<br>CAPACITOR E/ALUMINUM | 47uF M 25V 5x11 T        |
|------|----------------|------------------------------------|--------------------------|
| C732 | CEET-F470M-CI0 | CAPACITOR E/ALUMINUM               | 47uF M 25V 5x11 T        |
| C733 | CCAT-J101K-AAB | CAPACITOR CERAMIC                  | 100PF K 50V B T          |
| C734 | CCAT-J101K-AAB | CAPACITOR CERAMIC                  | 100PF K 50V B T          |
| C735 | CCAT-J330J-AAZ | CAPACITOR CERAMIC                  | 33PF J 50V SL T          |
| C736 | CCAT-J330J-AAZ | CAPACITOR CERAMIC                  | 33PF J 50V SL T          |
| C737 | CEET-J100M-CI0 | CAPACITOR E/ALUMINUM               | 10uF M 50V 5x11 T        |
| C738 | CEET-J100M-CI0 | CAPACITOR E/ALUMINUM               | 10uF M 50V 5x11 T        |
| C739 | CEET-J100M-CI0 | CAPACITOR E/ALUMINUM               | 10uF M 50V 5x11 T        |
| C740 | CEET-J100M-CI0 | CAPACITOR E/ALUMINUM               | 10uF M 50V 5x11 T        |
| C741 | CFMT-N392J-DJ0 | CAPACITOR F/POLYESTR               | 0.0039uF J 100V 5.8x12 T |
| C742 | CFMT-N392J-DJ0 | CAPACITOR F/POLYESTR               | 0.0039uF J 100V 5.8x12 T |
| C743 | CFMT-N183J-EK0 | CAPACITOR F/POLYESTR               | 0.018uF J 100V 7.3x13 T  |
| C744 | CFMT-N183J-EK0 | CAPACITOR F/POLYESTR               | 0.018uF J 100V 7.3x13 T  |
| C745 | CFMT-N153J-EK0 | CAPACITOR F/POLYESTR               | 0.015uF J 100V 7.1x13 T  |
| C746 | CFMT-N153J-EK0 | CAPACITOR F/POLYESTR               | 0.015uF J 100V 7.1x13 T  |
| C747 | CFMT-N823J-IK0 | CAPACITOR F/POLYESTR               | 0.082uF J 100V 10.6x14 T |
| C748 | CFMT-N823J-IK0 | CAPACITOR F/POLYESTR               | 0.082uF J 100V 10.6x14 T |

## 4-3. ST-BY P.C.BOARD

| CW702 | U508-4M714-250 | CONNECTORS<br>WIRE-ASS'Y | 1007#26 YEL-140 5P |
|-------|----------------|--------------------------|--------------------|
|-------|----------------|--------------------------|--------------------|

| Ref. No.     | Part No.                         | Description                               |                                   |
|--------------|----------------------------------|---|-----------------------------------|
| PCB<br>SW704 | PCSR-04810-11B<br>SWTA-00220-060 | MISCELLANEOUS<br>PCB-ST BY<br>SWITCH-TACT | A1R-481D<br>SKHV10910(A) 12V 50mA |

|       |                |                       |                 |
|-------|----------------|-----------------------|-----------------|
| LD707 | DPLE-00280-RG0 | DIODES<br>DISPLAY-LED | SAM5270 RED/GRN |
|-------|----------------|-----------------------|-----------------|

#### 4-4. MUTE P.C. BOARD

|              |                                  |  |                                   |
|--------------|----------------------------------|--|-----------------------------------|
| CN703        | KNCW-00160-3S9                   | CONNECTORS<br>CONNECTOR-WAFER            | 53015-0310 2mm-WHT                |
| PCB<br>SW726 | PCSR-04810-11B<br>SWTA-00220-060 | MISCELLANEOUS<br>PCB-MUTE<br>SWITCH-TACT | A1R-481E<br>SKHV10910(A) 12V 50mA |

#### 4-5. ENCODER VOLUME P.C. BOARD

|                              |  |   |  |
|------------------------------|--|---|--|
| SW750                        | SWRT-00200-020   | CONTROLS<br>ENCODER VOLUME  | EC16B243040H   |
| CN704                        | KNCW-00160-5S9   | CONNECTORS<br>CONNECTOR-WAFER   | 53015-0510 2mm-WHT   |
| R757<br>R758<br>R759<br>R760 | RCFT-E103J-000<br>RCFT-E103J-000<br>RCFT-E103J-000<br>RCFT-E103J-000 | RESISTORS<br>RESISTOR-CARBON FILM<br>RESISTOR-CARBON FILM<br>RESISTOR-CARBON FILM<br>RESISTOR-CARBON FILM | 10Kohm 1/5W J T<br>10Kohm 1/5W J T<br>10Kohm 1/5W J T<br>10Kohm 1/5W J T |
| Q711<br>Q712                 | TRTC-01700-SD0<br>TRTC-01700-SD0                                     | TRANSISTORS<br>TRANSISTOR N-H FREQ<br>TRANSISTOR N-H FREQ   | KRC107M W/RESIST TO92M<br>KRC107M W/RESIST TO92M                         |
| PCB                          | PCSR-04810-11B   | MISCELLANEOUS<br>PCB-ENCODER VOLUME   | A1R-481F   |
| C750<br>C751                 | CCAT-E222M-AAY<br>CCAT-E222M-AAY                                     | CAPACITORS<br>CAPACITOR CERAMIC<br>CAPACITOR CERAMIC  | 2200PF M 16V Y5R T<br>2200PF M 16V Y5R T                                 |

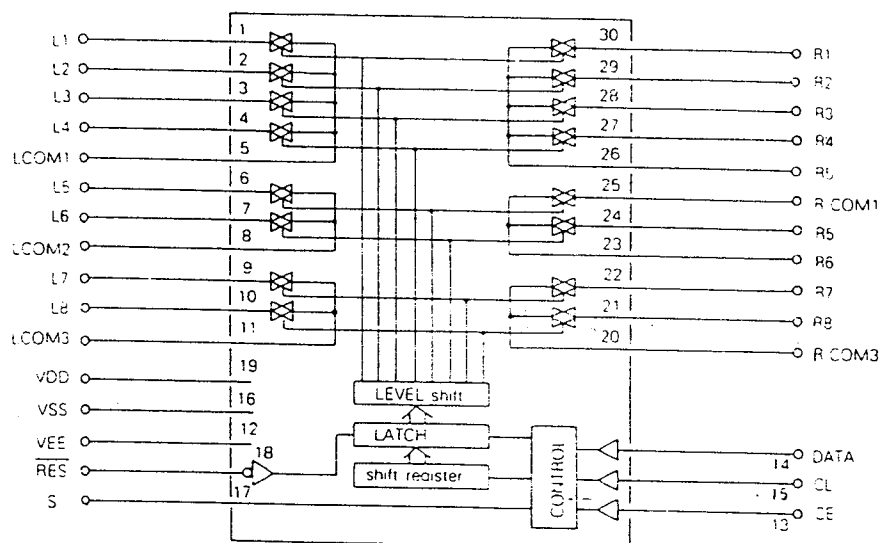
#### 4-6. HEADPHONE P.C. BOARD

|                              |  |   |  |
|------------------------------|--|---|--|
| SW766                        | SWPU-00602-060   | CONTROLS<br>SWITCH-PUSH   | SPUN24X1H DC25V 1A   |
| R789<br>R790<br>R791<br>R792 | RMOH-J221J-040<br>RMOH-J221J-040<br>RCFT-E152J-000<br>RCFT-E152J-000 | RESISTORS<br>RESISTOR-METAL OXIDE<br>RESISTOR-METAL OXIDE<br>RESISTOR-CARBON FILM<br>RESISTOR-CARBON FILM | 220ohm 2W J H<br>220ohm 2W J H<br>1.5Kohm 1/5W J T "AVR 18 ONLY"<br>1.5Kohm 1/5W J T "AVR 18 ONLY" |
| C789<br>C790                 | CCCT-J222K-0DB<br>CCCT-J222K-0DB                                     | CAPACITORS<br>CAPACITOR CERAMIC<br>CAPACITOR CERAMIC  | 2200PF K 50V B T "AVR 18 ONLY"<br>2200PF K 50V B T "AVR 18 ONLY"                                   |
| CN708<br>CN709<br>CH703      | U610-5M458-200<br>U510-4M432-200<br>U1T1-01520-Z10                   | CONNECTORS<br>WIRE-ASS'Y<br>WIRE-ASS'Y<br>WIRE-ASS'Y  | UL1007#20 GRN-580 6P<br>UL1007#20 YEL-320 5P<br>1007#22 BLK-200 3.2pi                              |
| JK702                        | SKPH-00332-66W   | MISCELLANEOUS<br>PHONE JACK   | HTJ-064-11   |

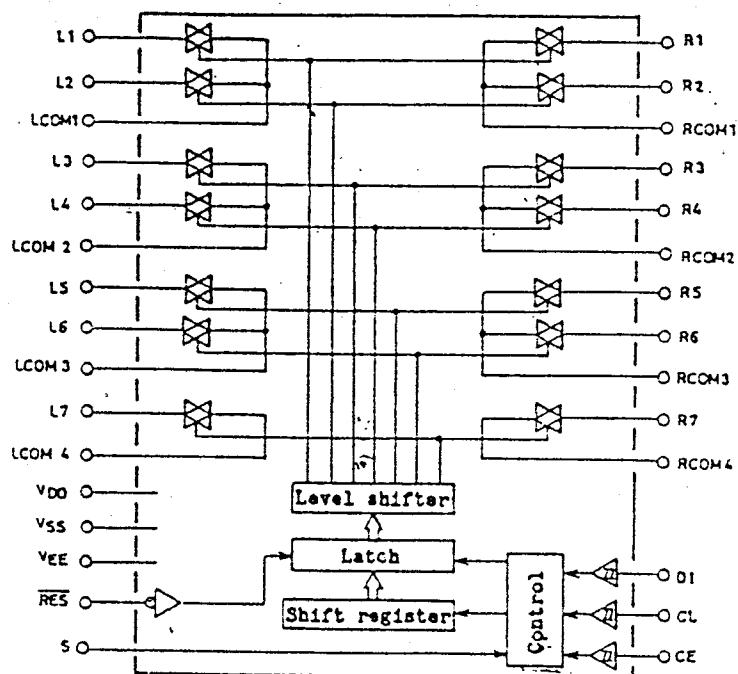
| Ref. No.                               | Part No.       | Description          |                               |
|--|----------------|----------------------|-------------------------------|
| PCB                                    | PCSR-04810-11B | PCB-SPEAKER ON/OFF   | A1R-481G                      |
| <b>DIODES</b>                          |                |                      |                               |
| D789                                   | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T    |
| D790                                   | DDTS-00070-SO0 | DIODE-SI             | 1SS133 (40V 0.11A) DO-40 T    |
| <b>CAPACITORS</b>                      |                |                      |                               |
| C788                                   | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T               |
| <b>4-7. VIDEO 3 INPUT P.C. BOARD</b>   |                |                      |                               |
| <b>CONNECTORS</b>                      |                |                      |                               |
| CW706                                  | UM08-50860-000 | WIRE-ASS'Y           | 1007#26,2547#28 BR,BK 460     |
| CH705                                  | U1T1-01520-Z10 | WIRE-ASS'Y           | 1007#22 BLK-200 3.2pi         |
| <b>RESISTORS</b>                       |                |                      |                               |
| R796                                   | RCFT-E471J-000 | RESISTOR-CARBON FILM | 470ohm 1/5W J T               |
| R797                                   | RCFT-E471J-000 | RESISTOR-CARBON FILM | 470ohm 1/5W J T               |
| R798                                   | RCFT-E750J-000 | RESISTOR-CARBON FILM | 75ohm 1/5W J T                |
| <b>MISCELLANEOUS</b>                   |                |                      |                               |
| JK701                                  | SKRC-00380-031 | SOCKET-RCA           | JK0300081G                    |
| PCB                                    | PCSR-04810-11B | PCB-VIDEO 3 INPUT    | A1R-481H                      |
| <b>CAPACITORS</b>                      |                |                      |                               |
| C763                                   | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T               |
| C764                                   | CCAT-J104Z-AAF | CAPACITOR CERAMIC    | 0.1uF Z 50V F T               |
| C771                                   | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T "AVR 18 ONLY" |
| C772                                   | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T "AVR 18 ONLY" |
| C773                                   | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T "AVR 18 ONLY" |
| C774                                   | CCAT-J101K-AAB | CAPACITOR CERAMIC    | 100PF K 50V B T "AVR 18 ONLY" |
| C775                                   | CEET-F330M-CIO | CAPACITOR E/ALUMINUM | 33uF M 25V 5x11 T             |
| <b>4-8. HEAT SINK GUIDE P.C. BOARD</b> |                |                      |                               |
| <b>MISCELLANEOUS</b>                   |                |                      |                               |
| PCB                                    | PCSR-04810-11B | PCB-HEAT SINK GUIDE  | A1R-481I                      |

## IC BLOCK DIAGRAMS

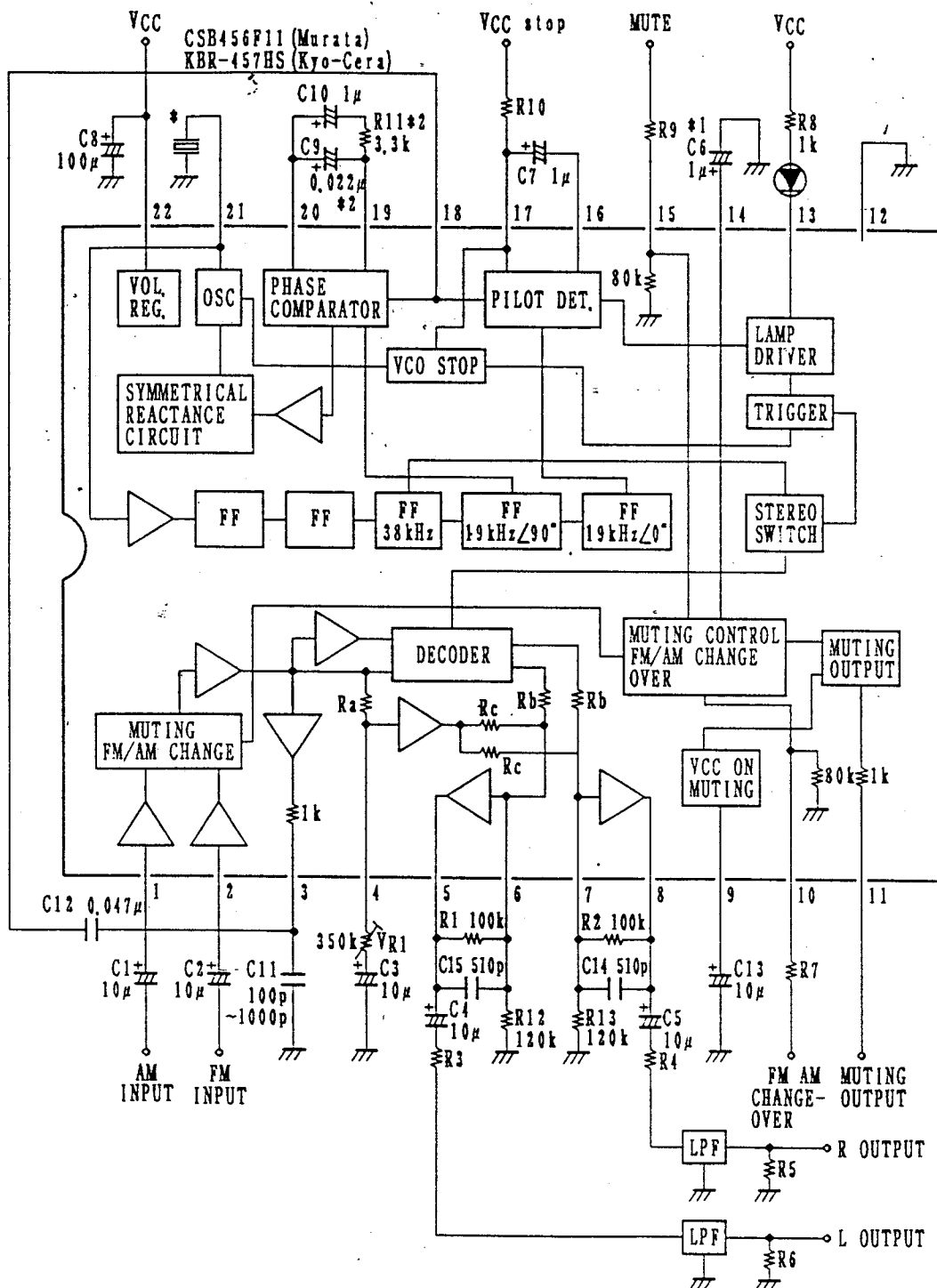
## IC402, IC403: LC7821 ANALOG FUNCTION SELECTOR



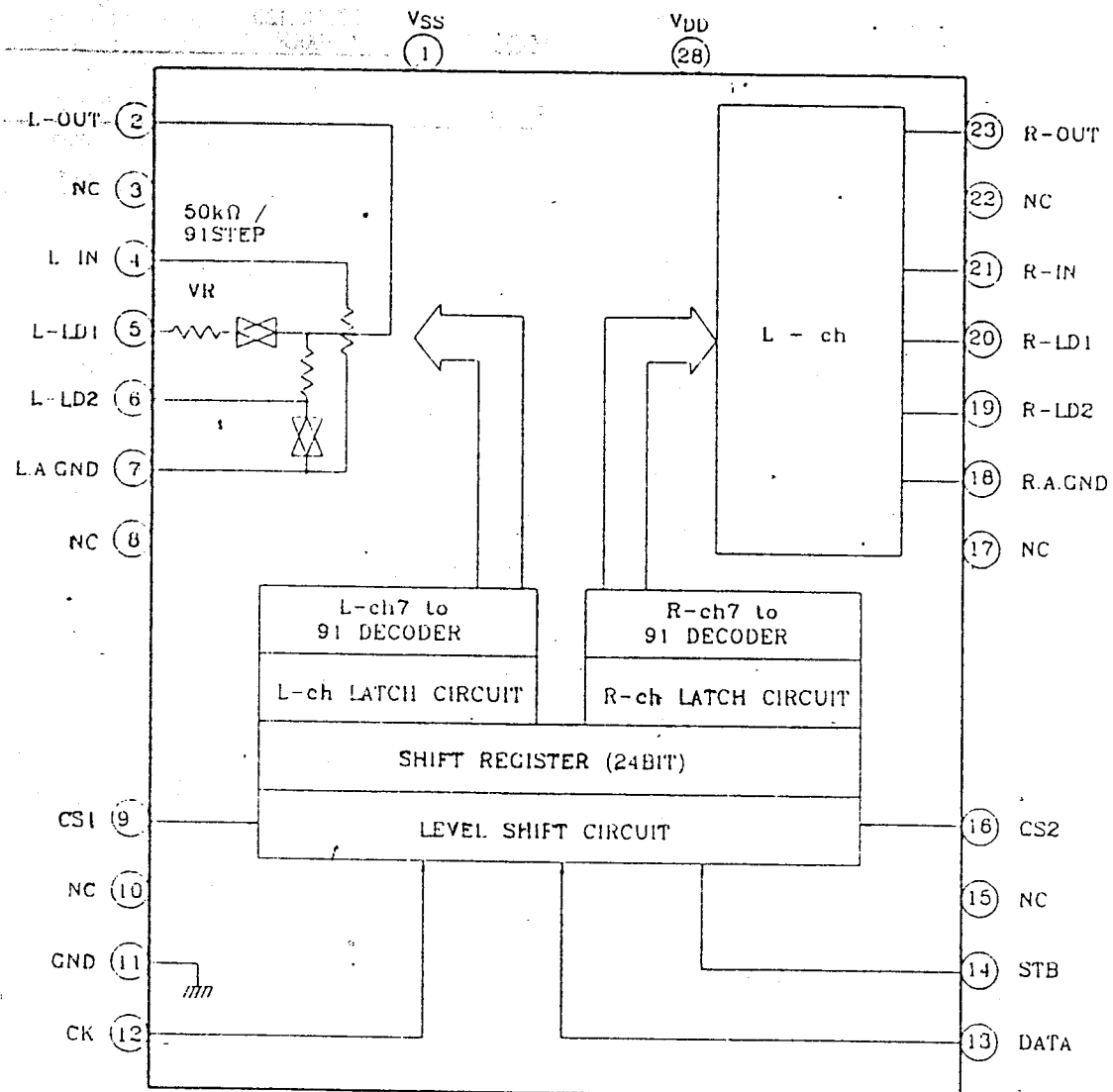
## IC804: LC78213 ANALOG FUNCTION SELECTOR



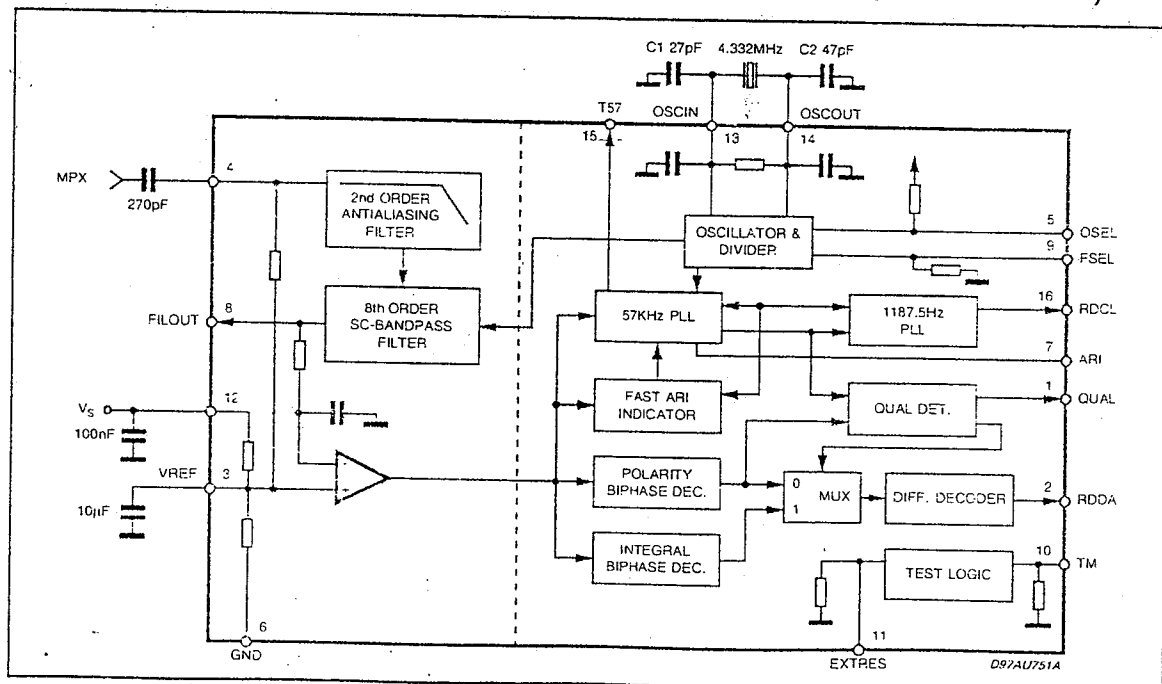
LA3401: IC603 FM/AM MPX IC



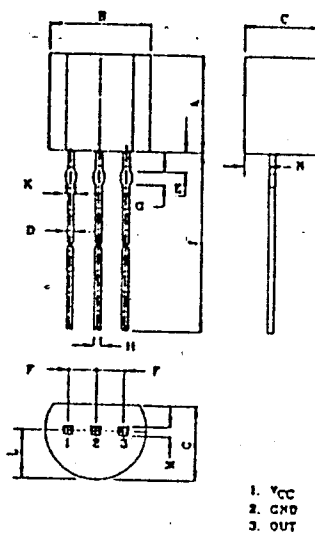
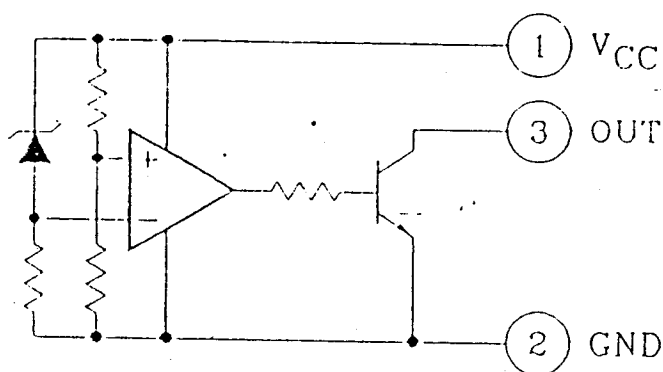
IC805, IC806, IC807: KIA9459F VOLUME CONTROL



BLOCK DIAGRAM TDA7479: IC604 RDS DEMODULATOR + FILTER (AVR18RDS ONLY)

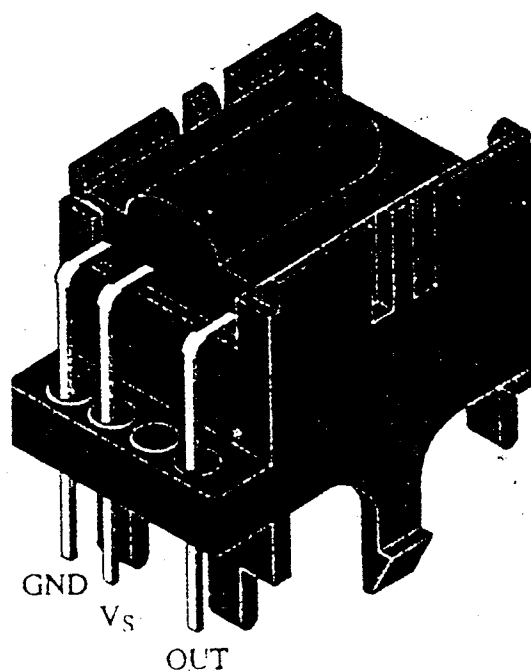
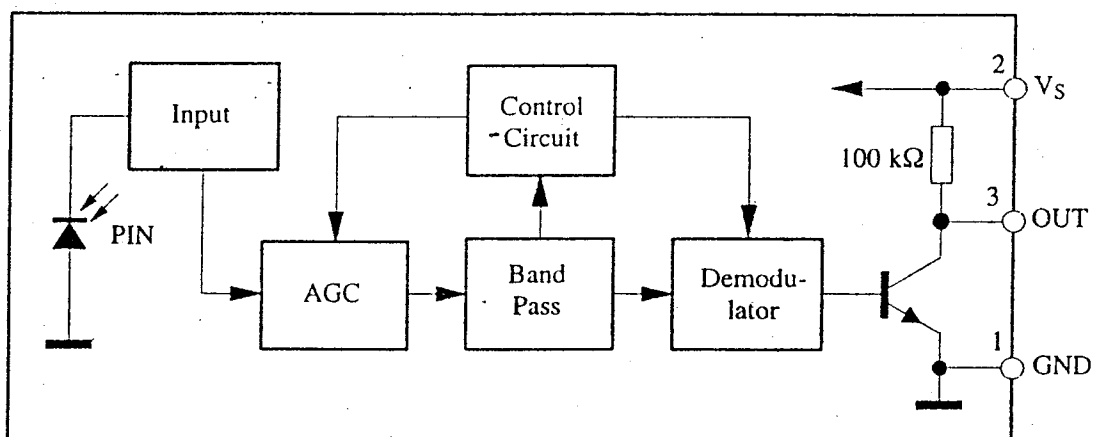


IC KIA7042: IC702 RESET



IC TFMT5.0: IC703 REMOTE RECEIVER

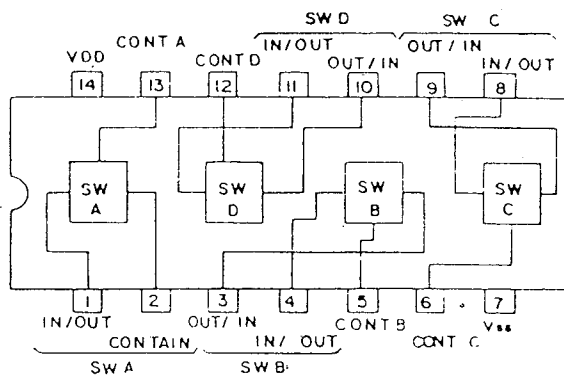
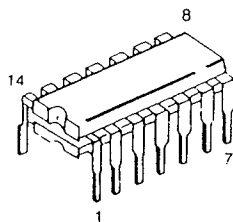
Block Diagram



**LC4966B: IC406 BIPOLAR SWITCH**

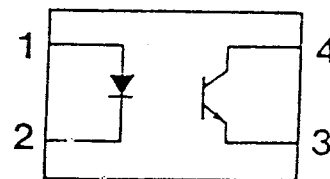
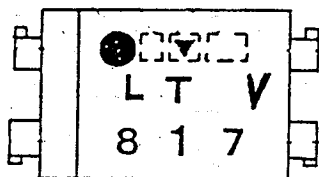
**Block Diagram**

**Package Outline**



**LTV817B: IC5 PHOTO COUPLER**

Pin No. and internal connection diagram

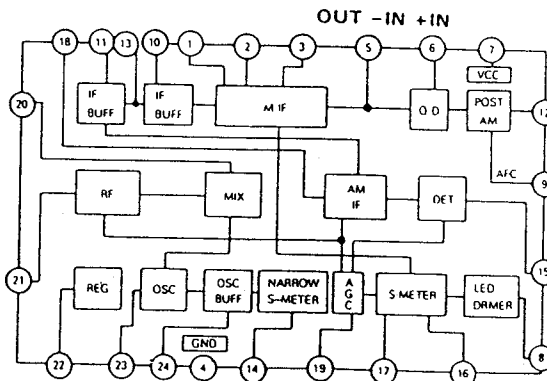
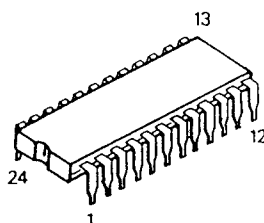


- 1. Anode
- 2. Cathode
- 3. Emitter
- 4. Collector

**LA1266: IC601 AM/FM IF**

**Block Diagram**

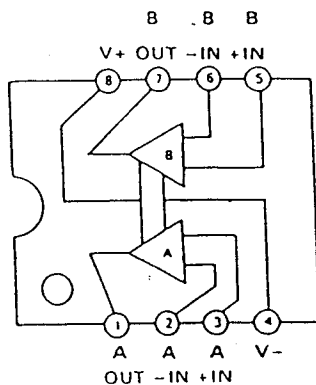
**Package Outline**





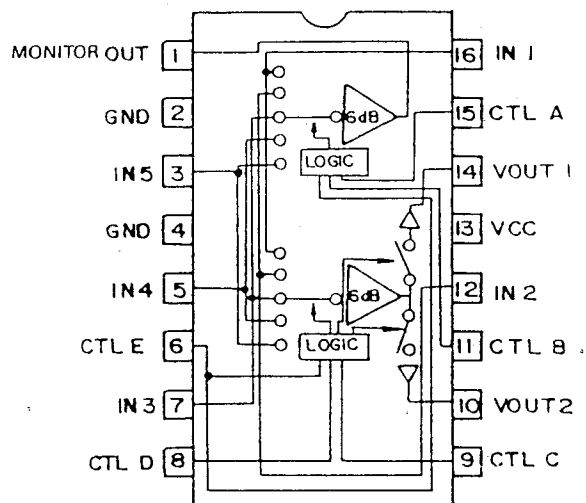
IC705, IC6, IC7, IC401, IC404, IC405,  
IC408, IC801, IC802, IC803, IC808,  
IC809, IC810, IC811:

NJM2068DD/ NJM4558M DUAL OP AMP

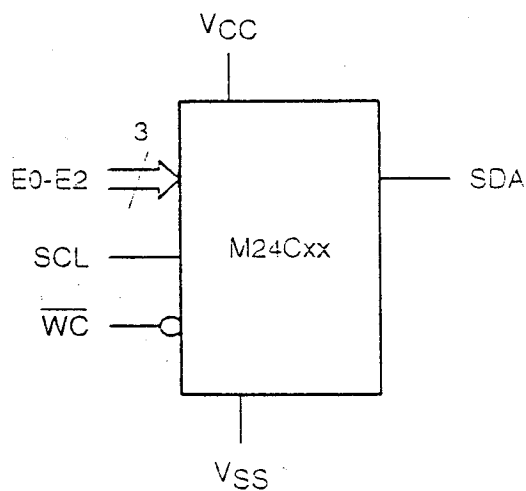


IC901: BA7625

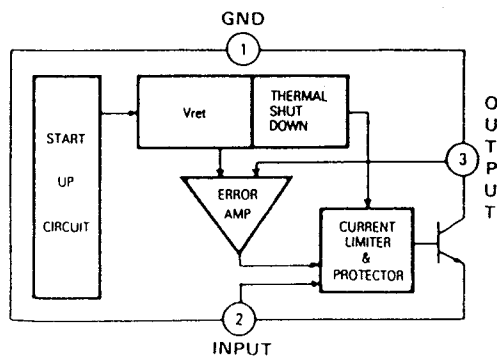
VIDEO SIGNAL SWITCHER



24C0281P: IC704 2K CMOS EEPROM

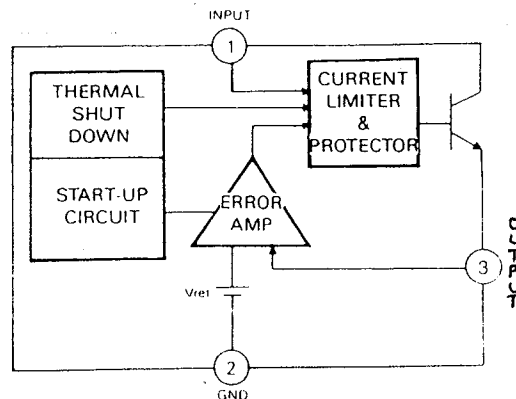


IC3: KA79XX REGULATOR

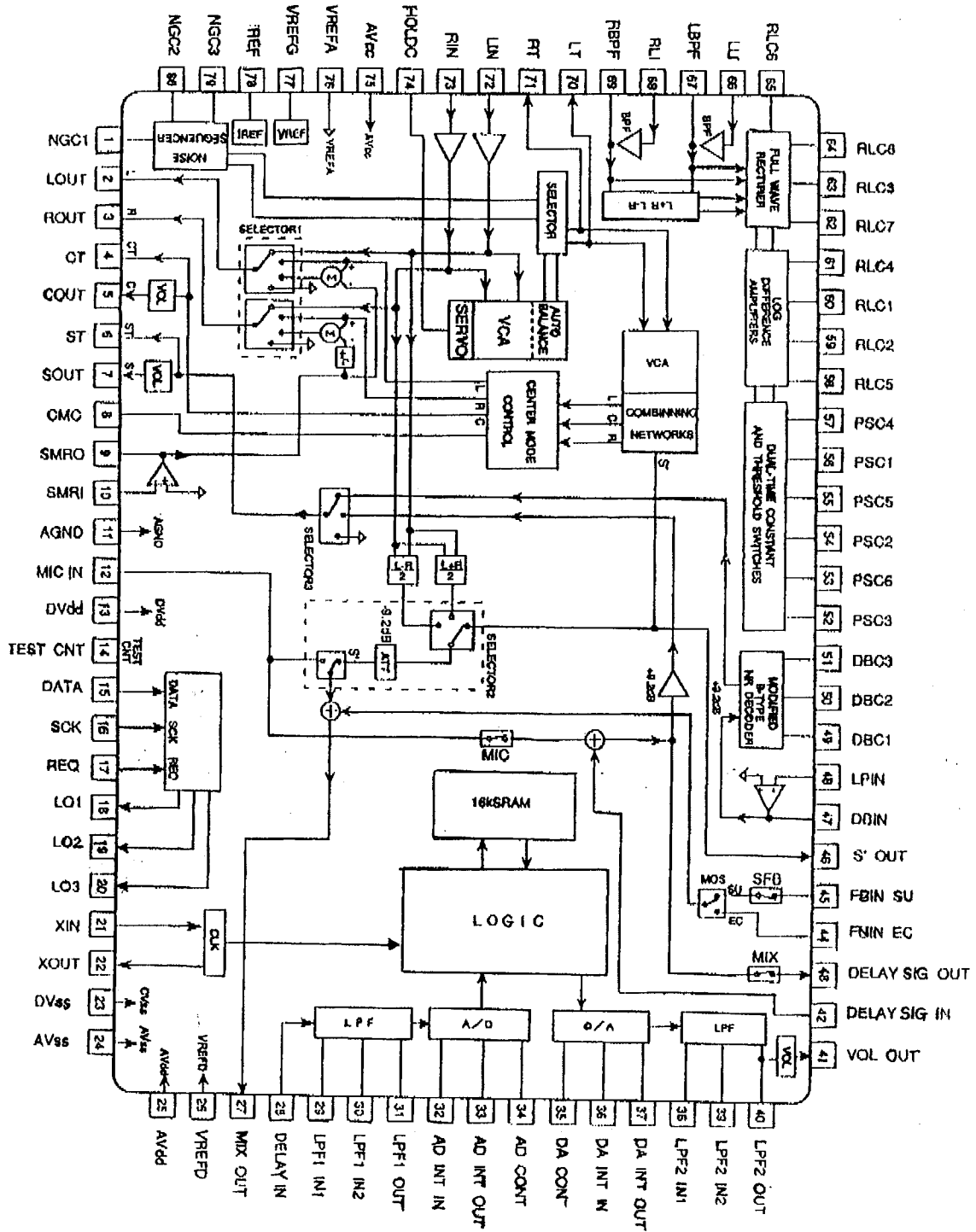


IC1, IC2, IC4:

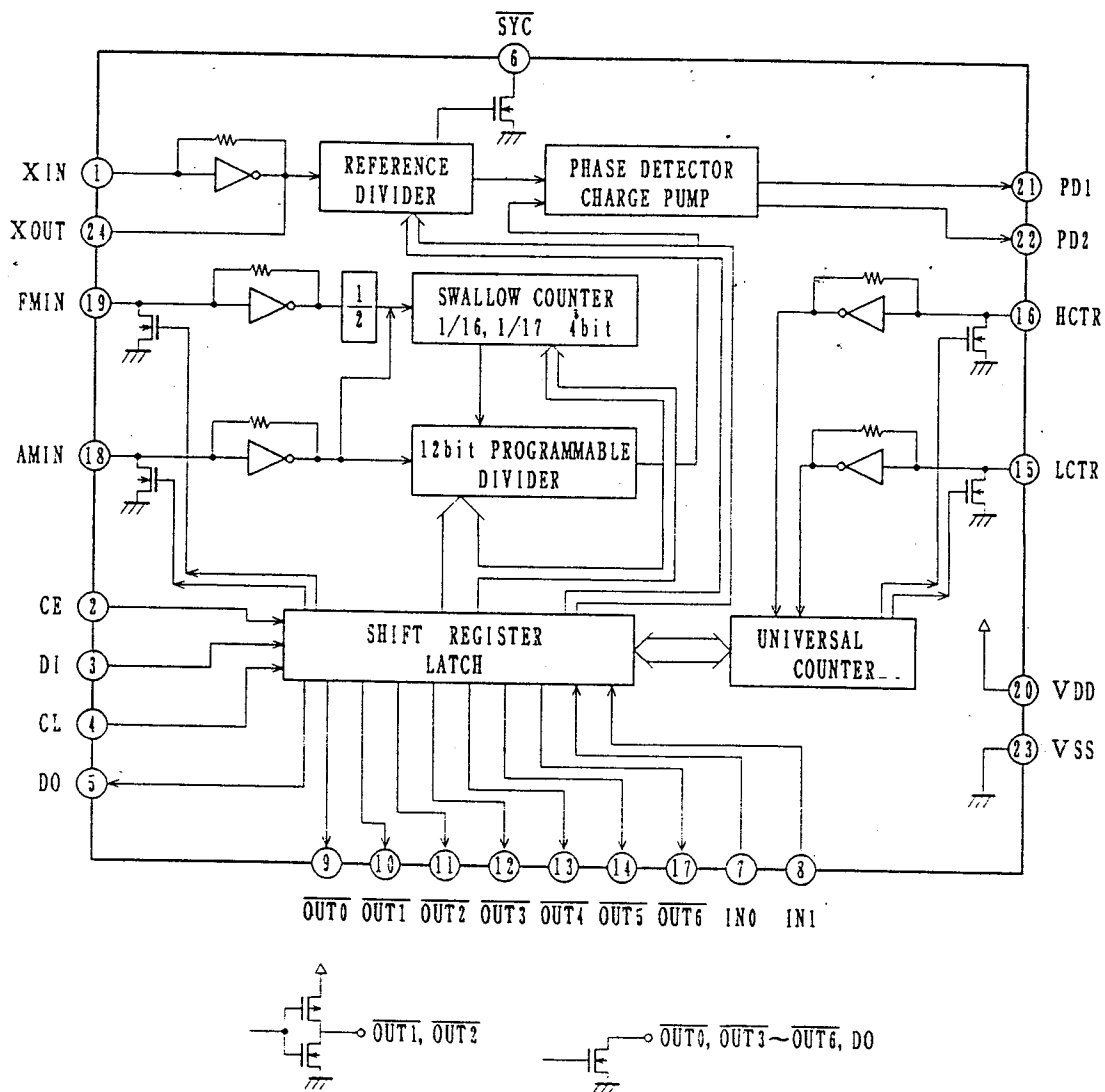
KA78XX REGULATOR



IC407 DOLBY PRO LOGIC SURROUND DECODER : NJW1103F




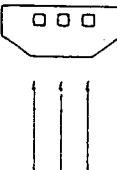


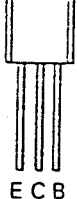
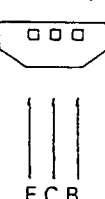
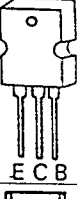



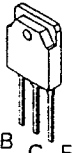



LC7218JM: IC602 PLL FREQUENCY SYNTHESIZER

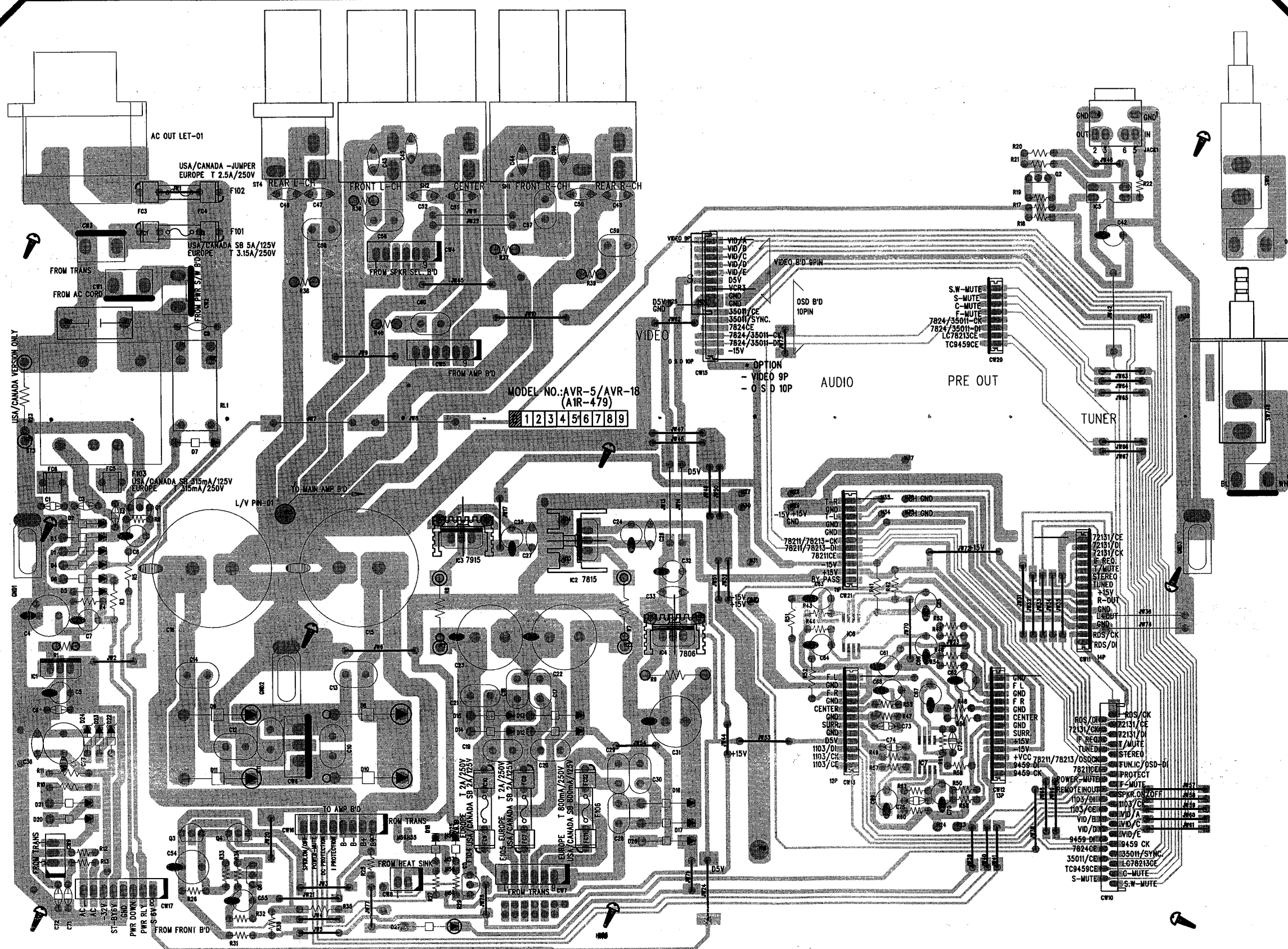




## TRANSISTORS LEAD IDENTIFICATION

| TRANSISTOR   | FRONT VIEW  | BOTTOM VIEW   |
|--|---|---|
| KTD1302<br>KTC3200/KTC2240<br>KTC3198/KTC1815<br>KTC1923/KTC3194<br>KTA2400<br>KTA1268/KTA970<br>KTA1266/KTA1015 |    |    |
| DTC114YS<br>DTA114YS<br>KRA107M  |    |    |
| MPSA06<br>MPSA56   |    |    |
| KTA1024<br>KTC3206<br>KTA1267Y   |  |  |
| 2SC4137<br>2SC4883<br>2SA1859  |  |  |
| 2SK168D  |  |  |
| 2SA1695-Y<br>2SC4468-Y   |  |  |
| TERMINAL NAME  |   |   |
| D→DRAIN<br>G→GATE<br>S→SOURCE  |   | B→BASE<br>C→COLLECTOR<br>E→EMITTER  |

MAIN P.C BOARD



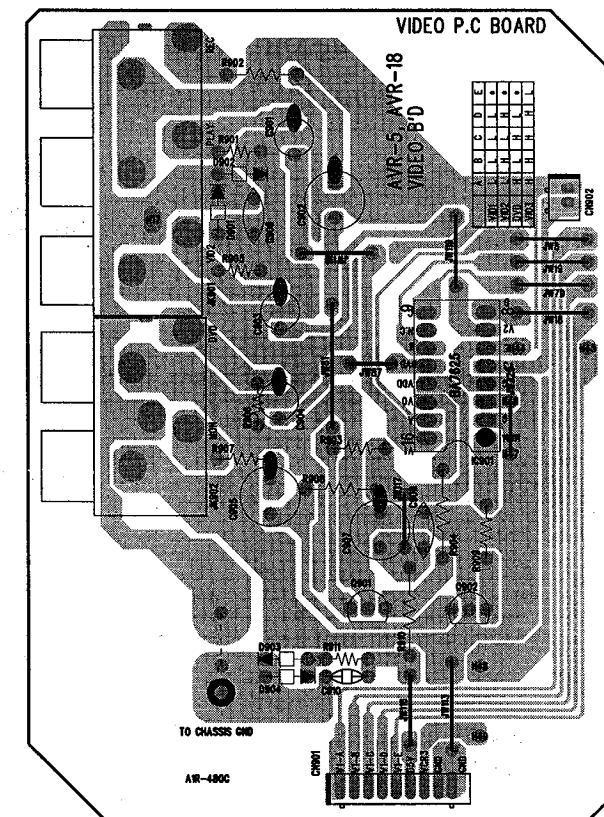
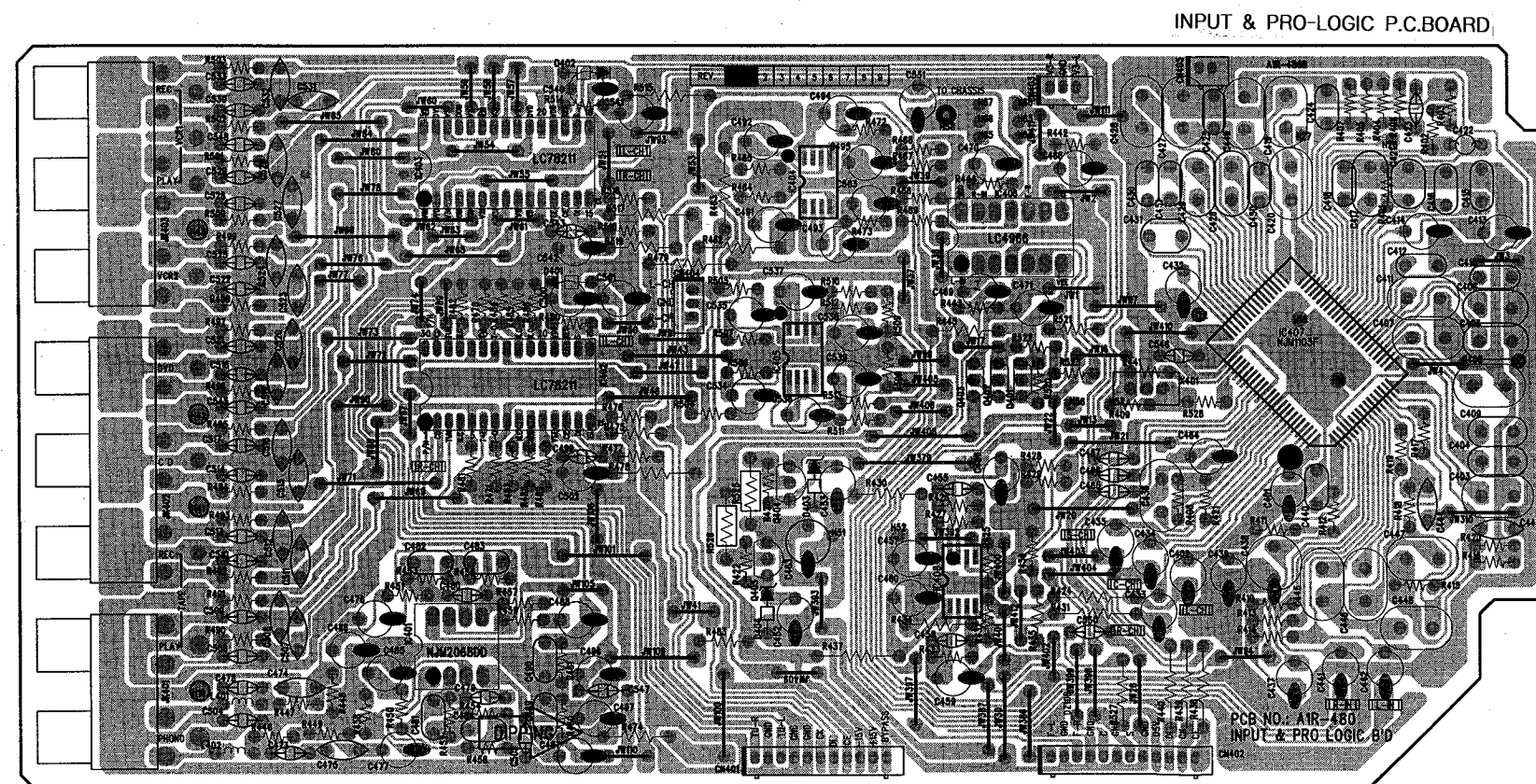
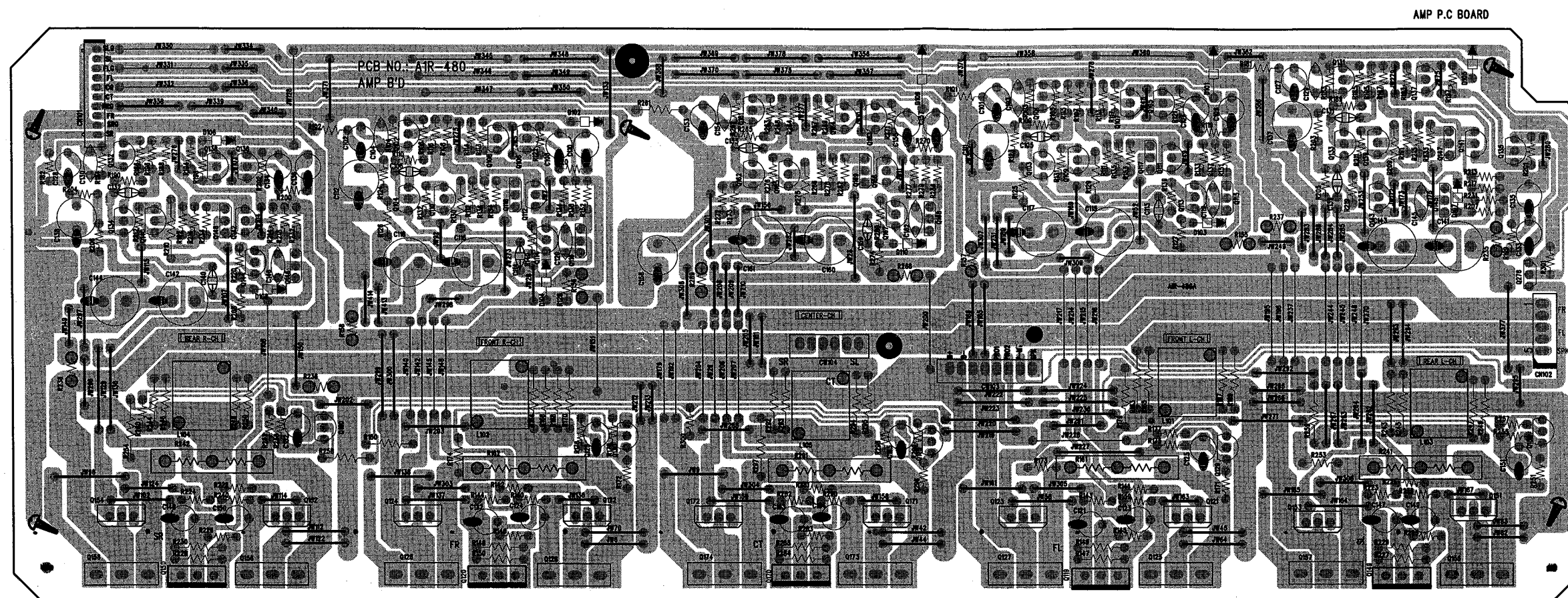




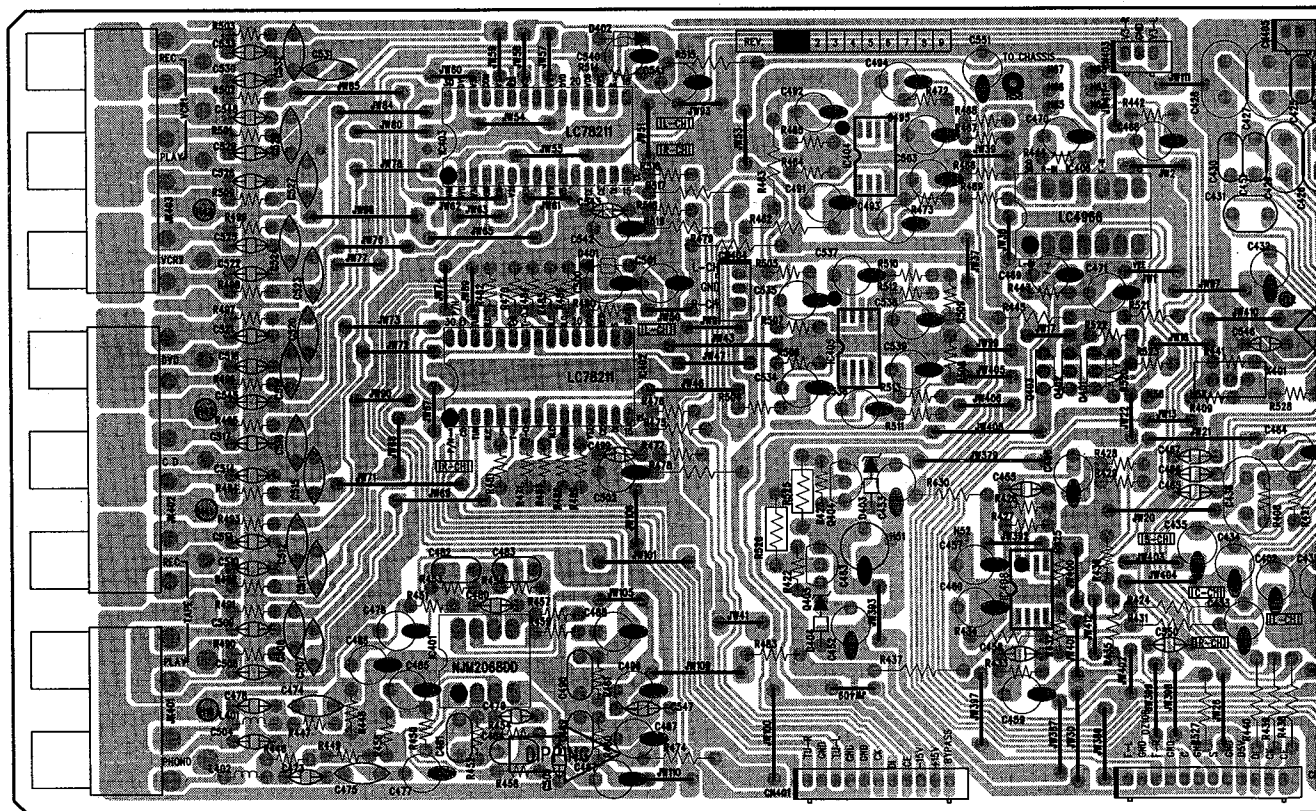
## H



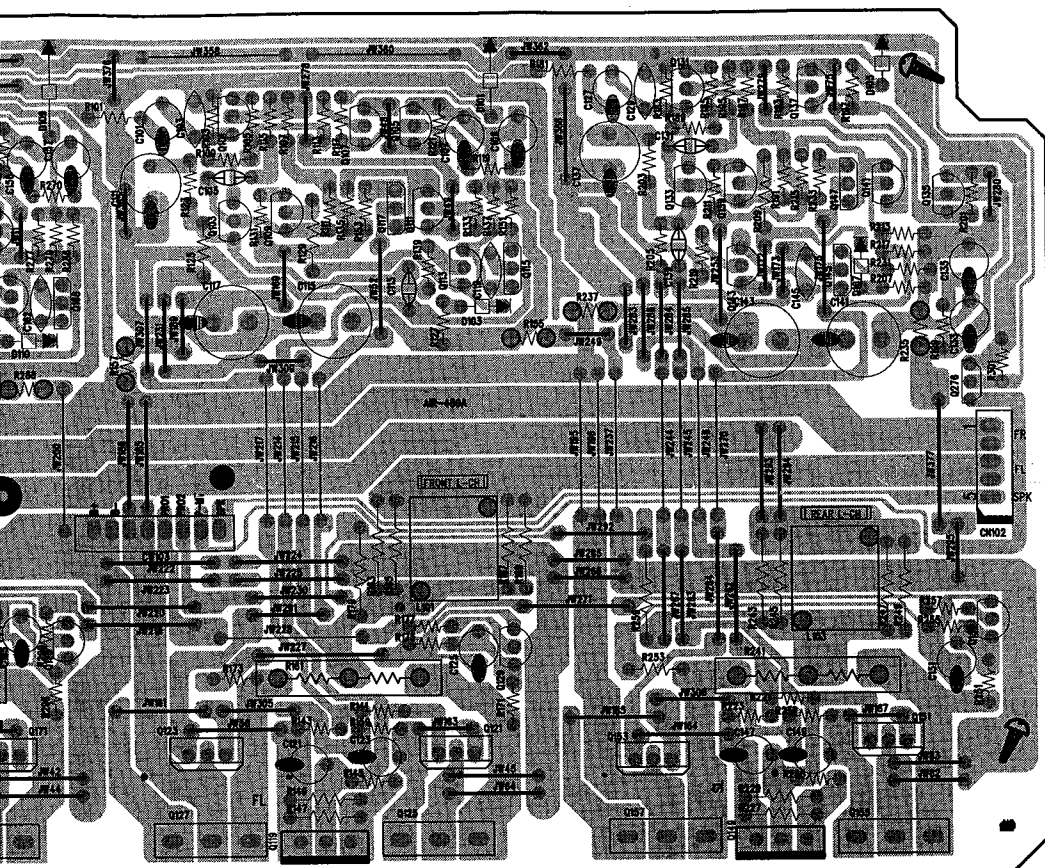




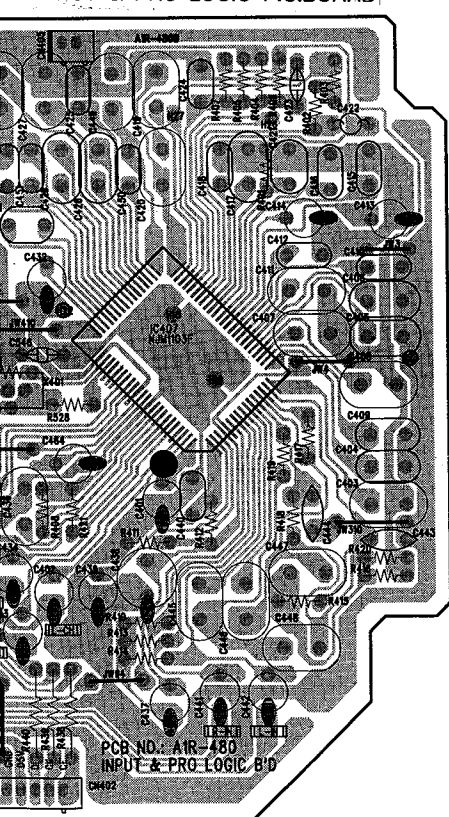




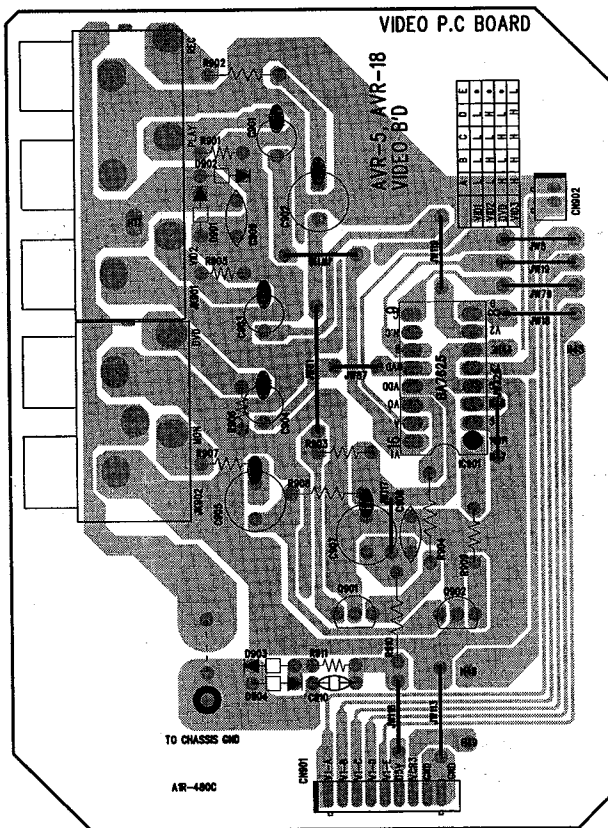
AMP P.C BOARD



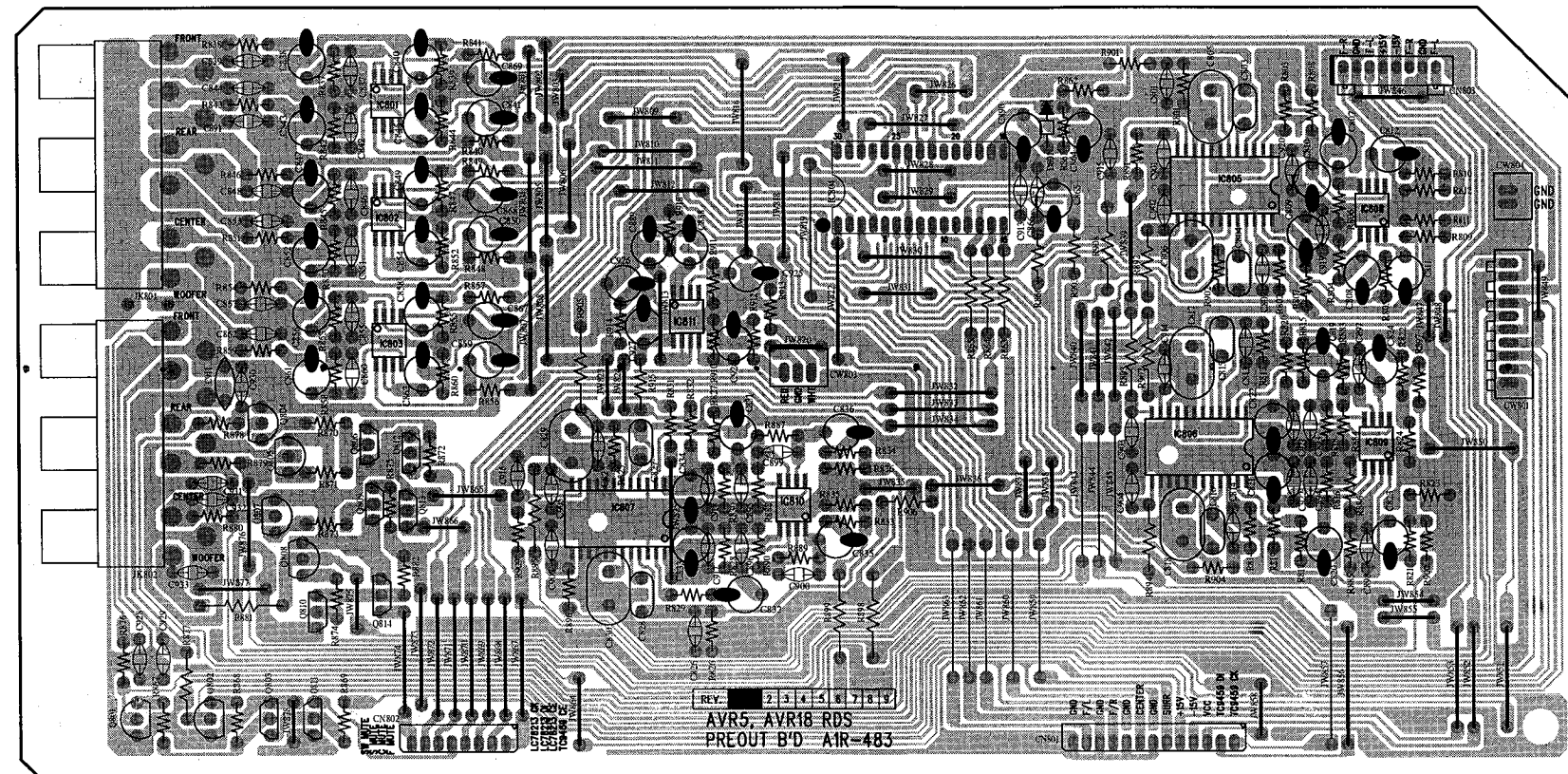
INPUT & PRO-LOGIC P.C BOARD



VIDEO P.C BOARD

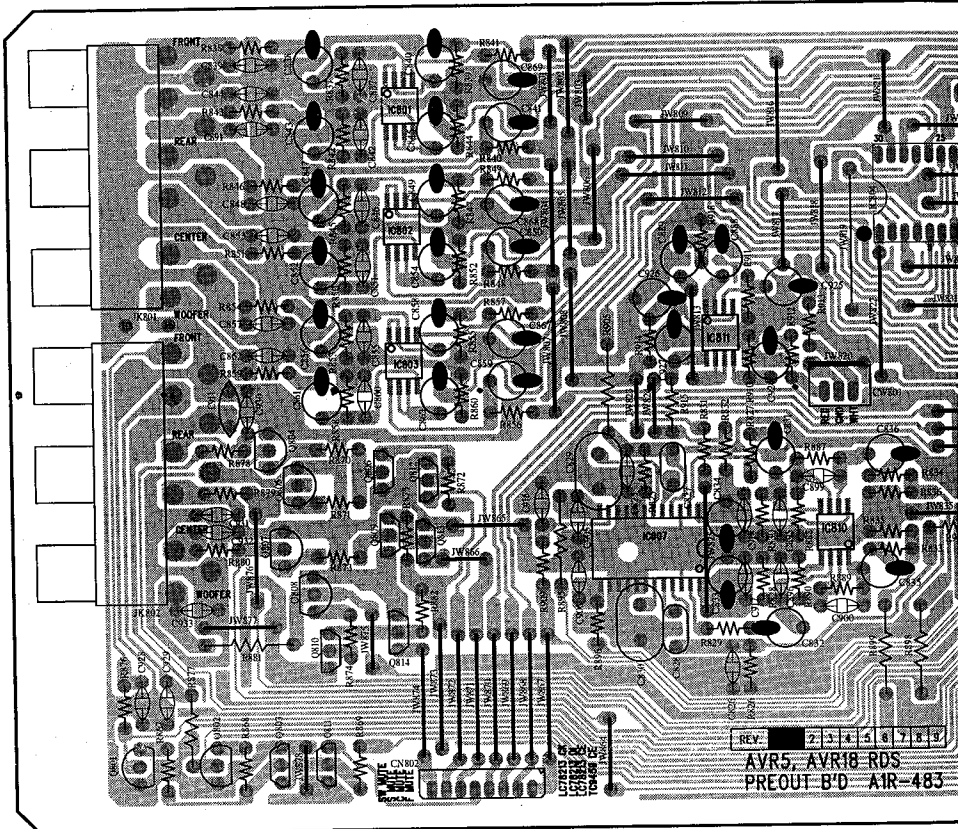


PRE/IN OUT P.C BOARD

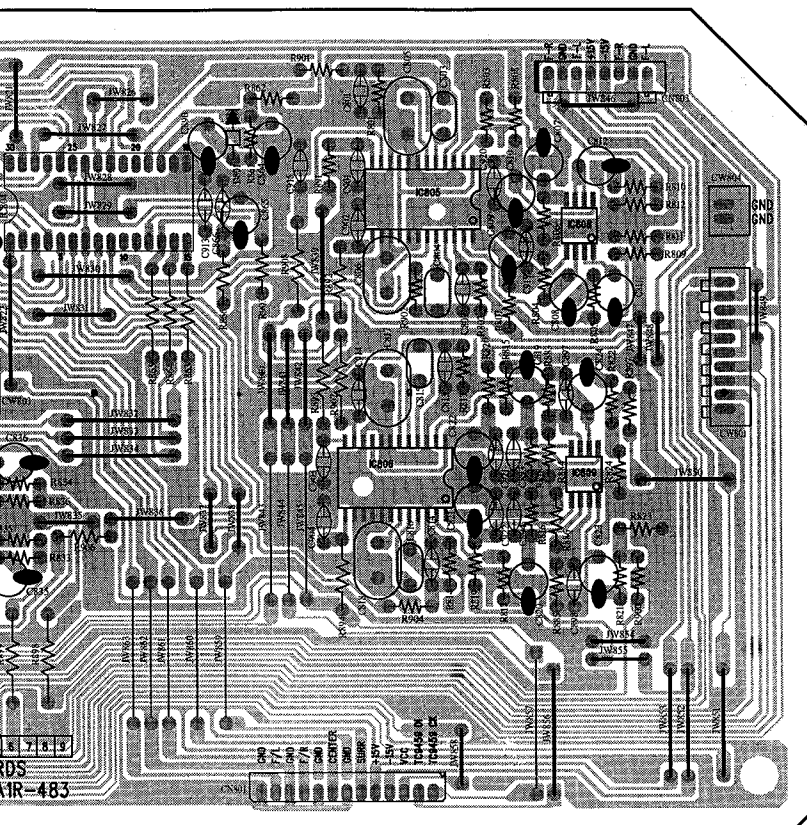




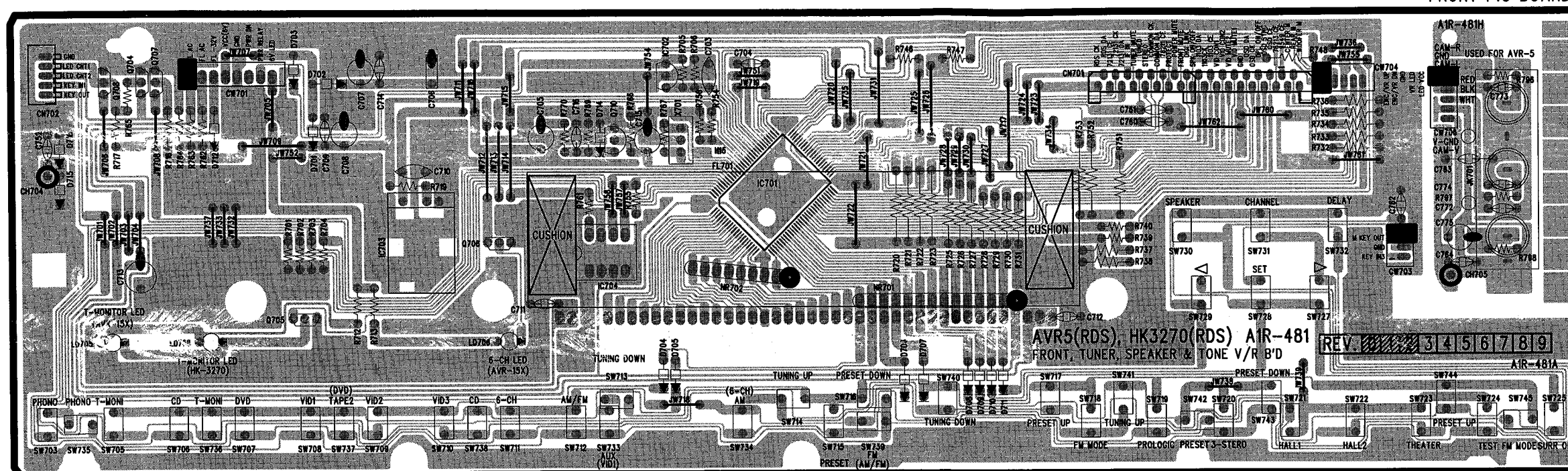
## P. C. BOARD



PRE/IN OUT P.C BOARD

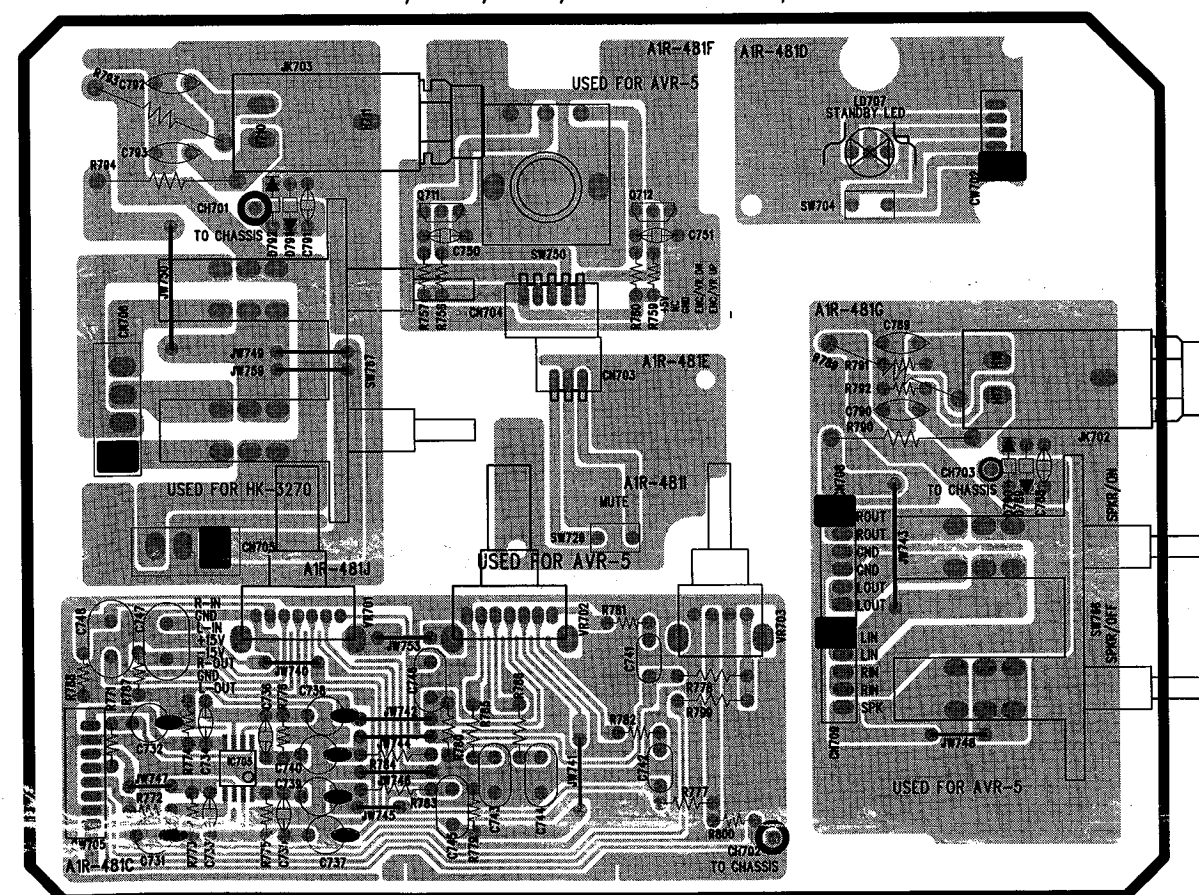
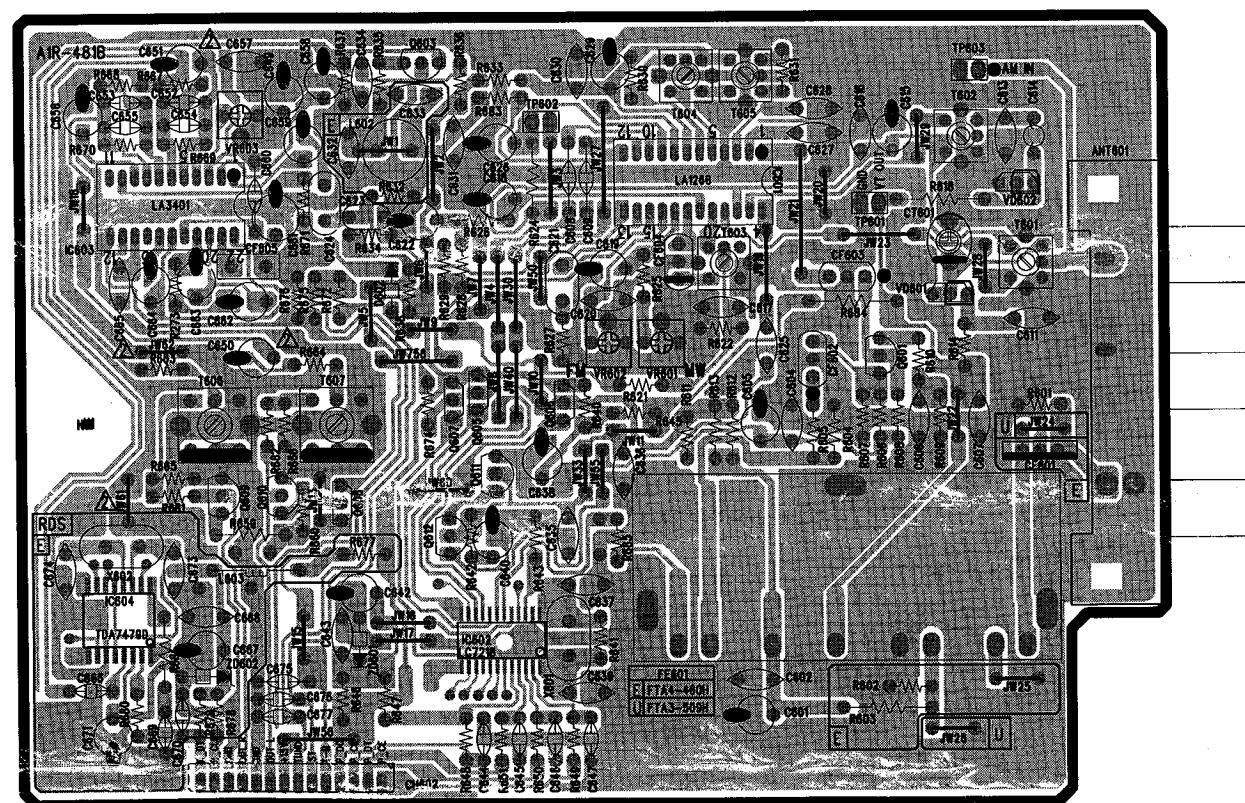


FRONT P.C BOARD



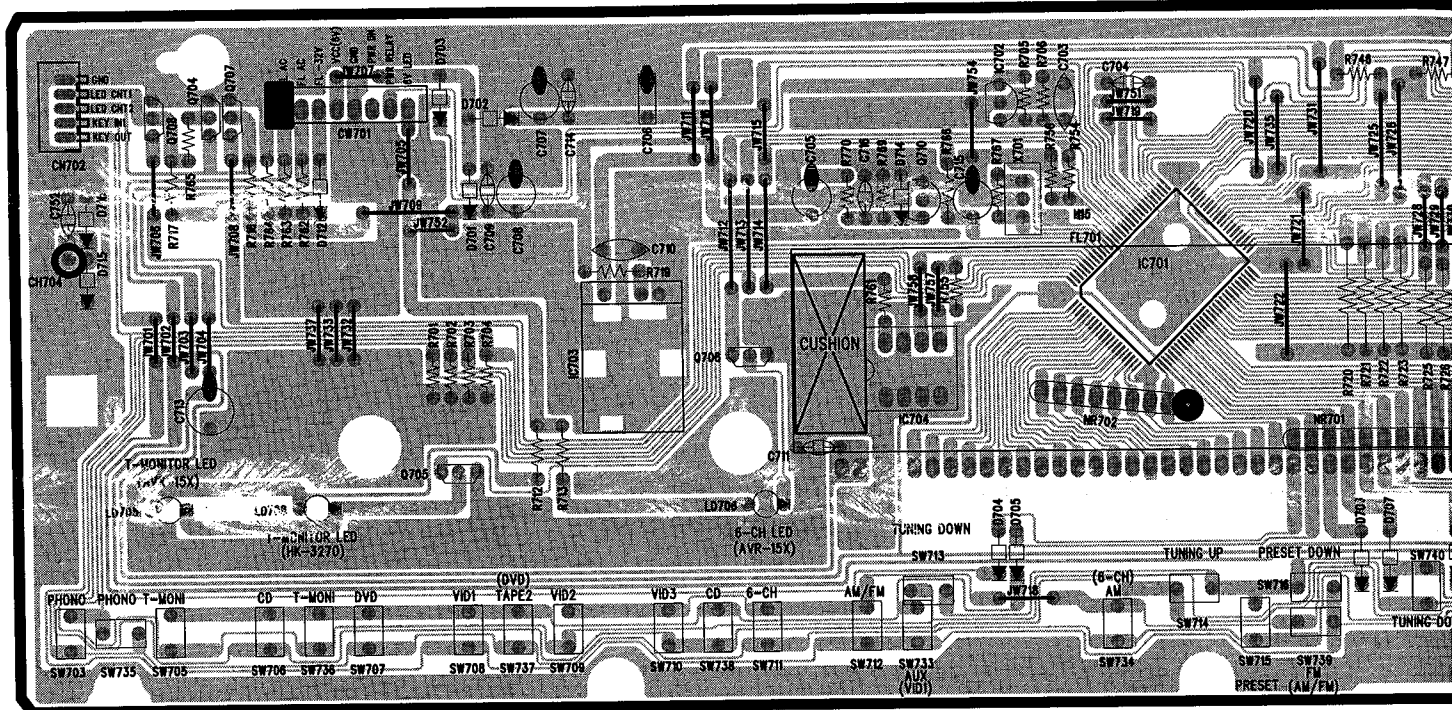
HEADPHONE/MUTE/TONE/ENCODER VOLUME/STANDBY P.C BOARD

TUNER P.C BOARD

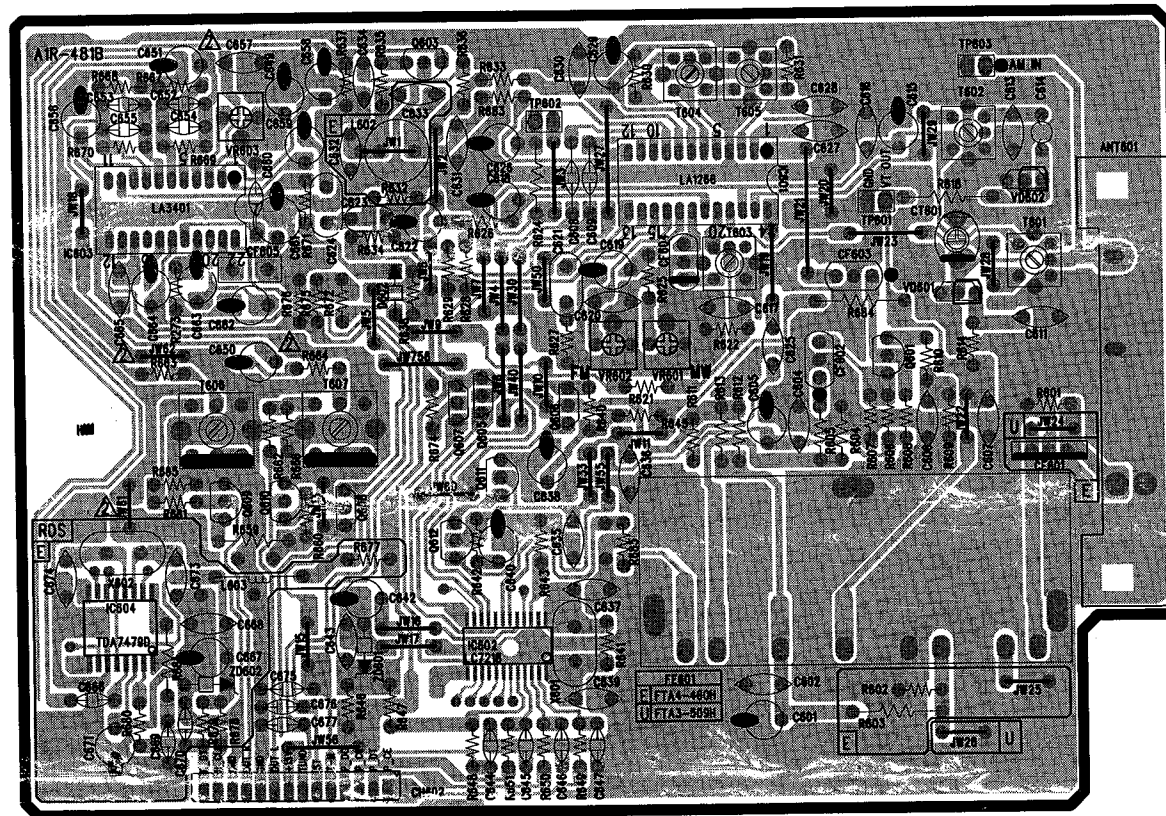




# P. C. BOARD

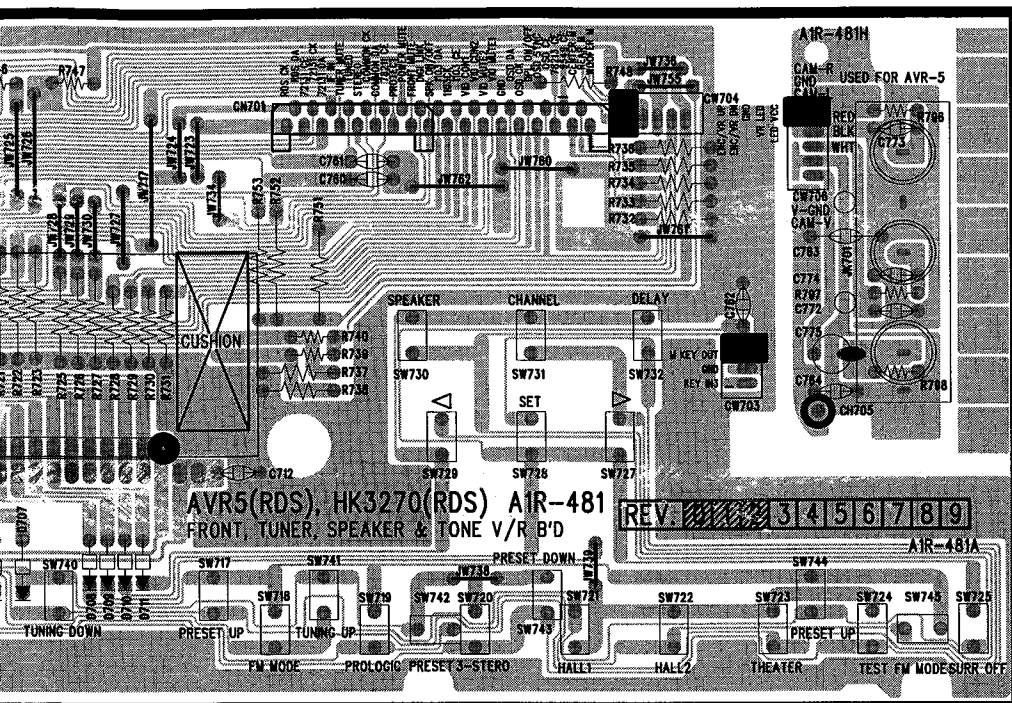


## TUNER P.C BOARD

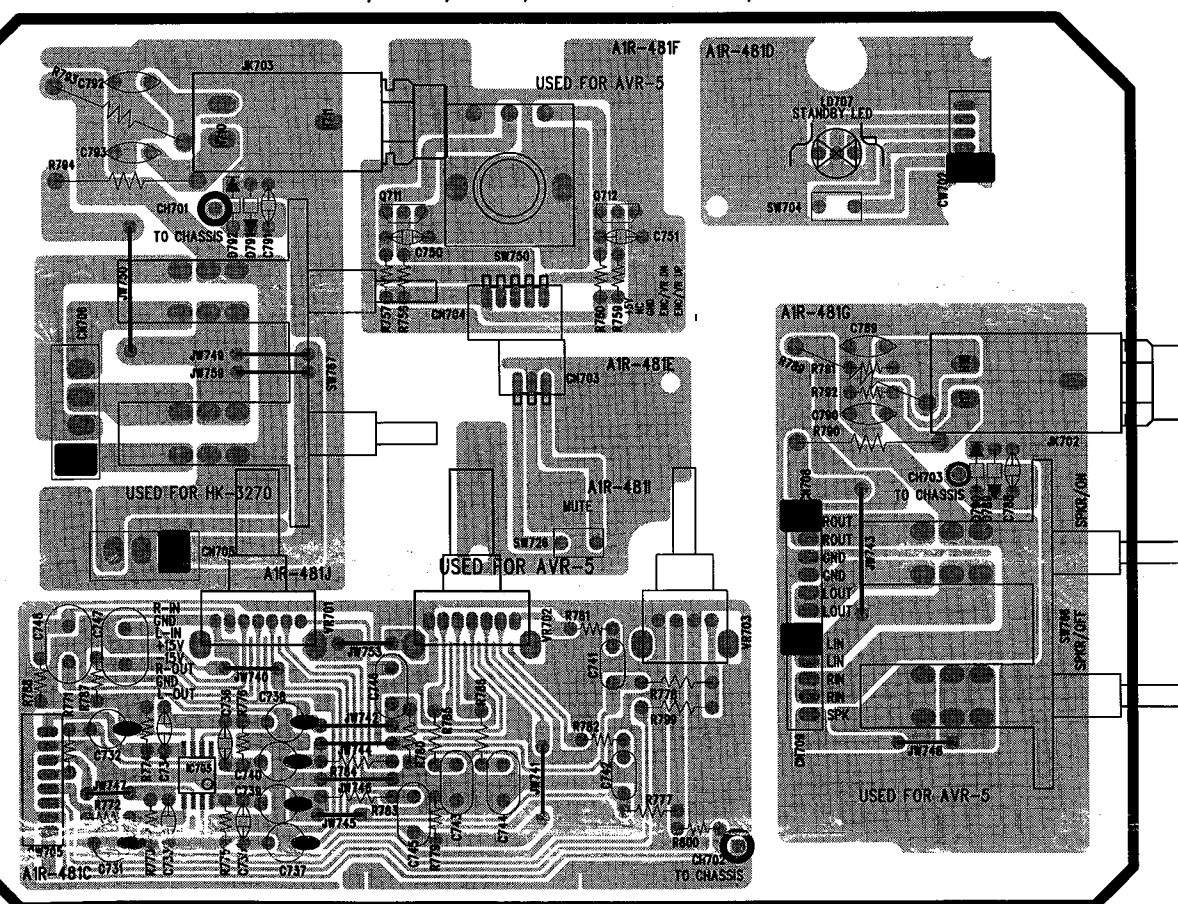




FRONT P.C BOARD

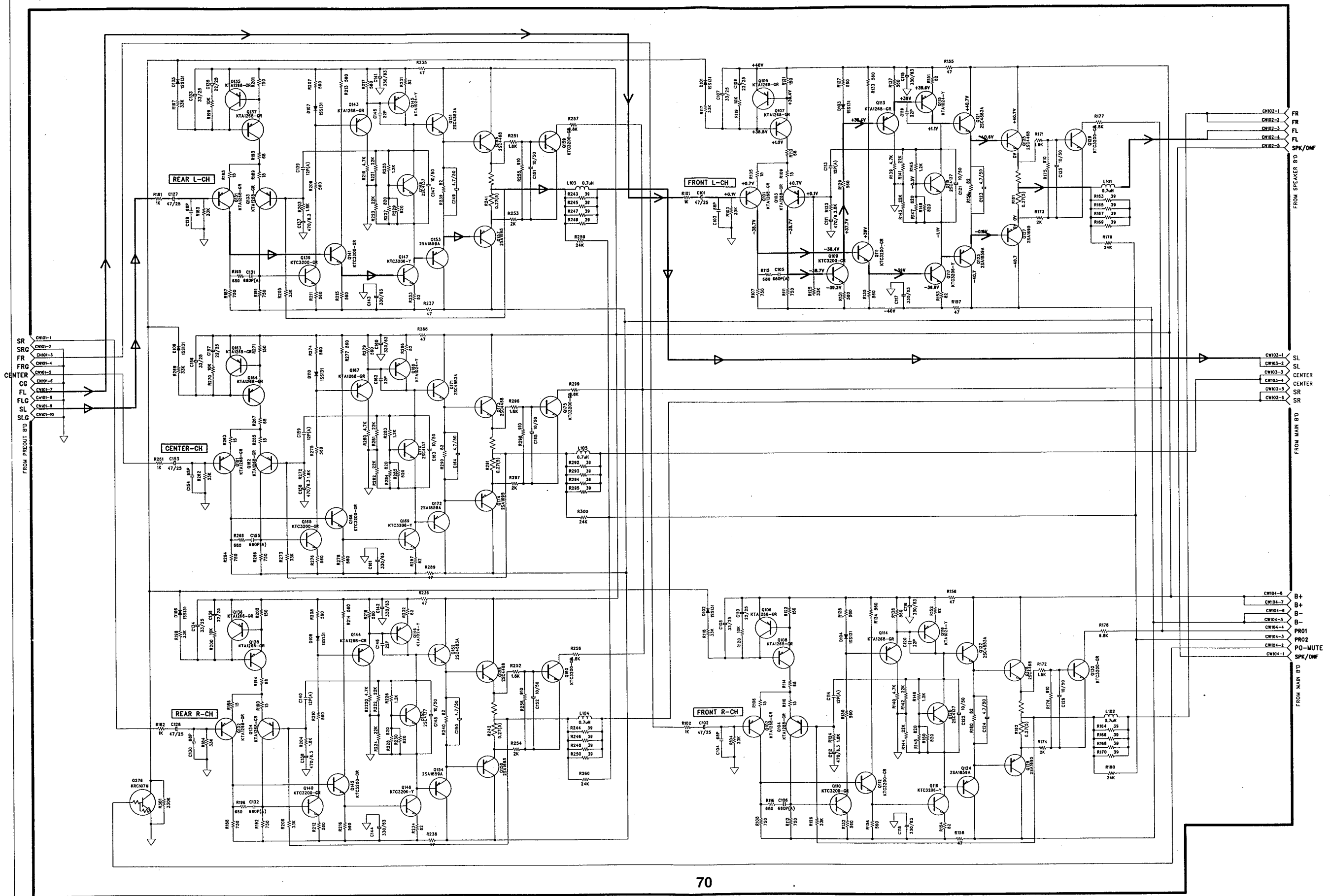


HEADPHONE/MUTE/TONE/ENCODER VOLUME/STANDBY P.C BOARD

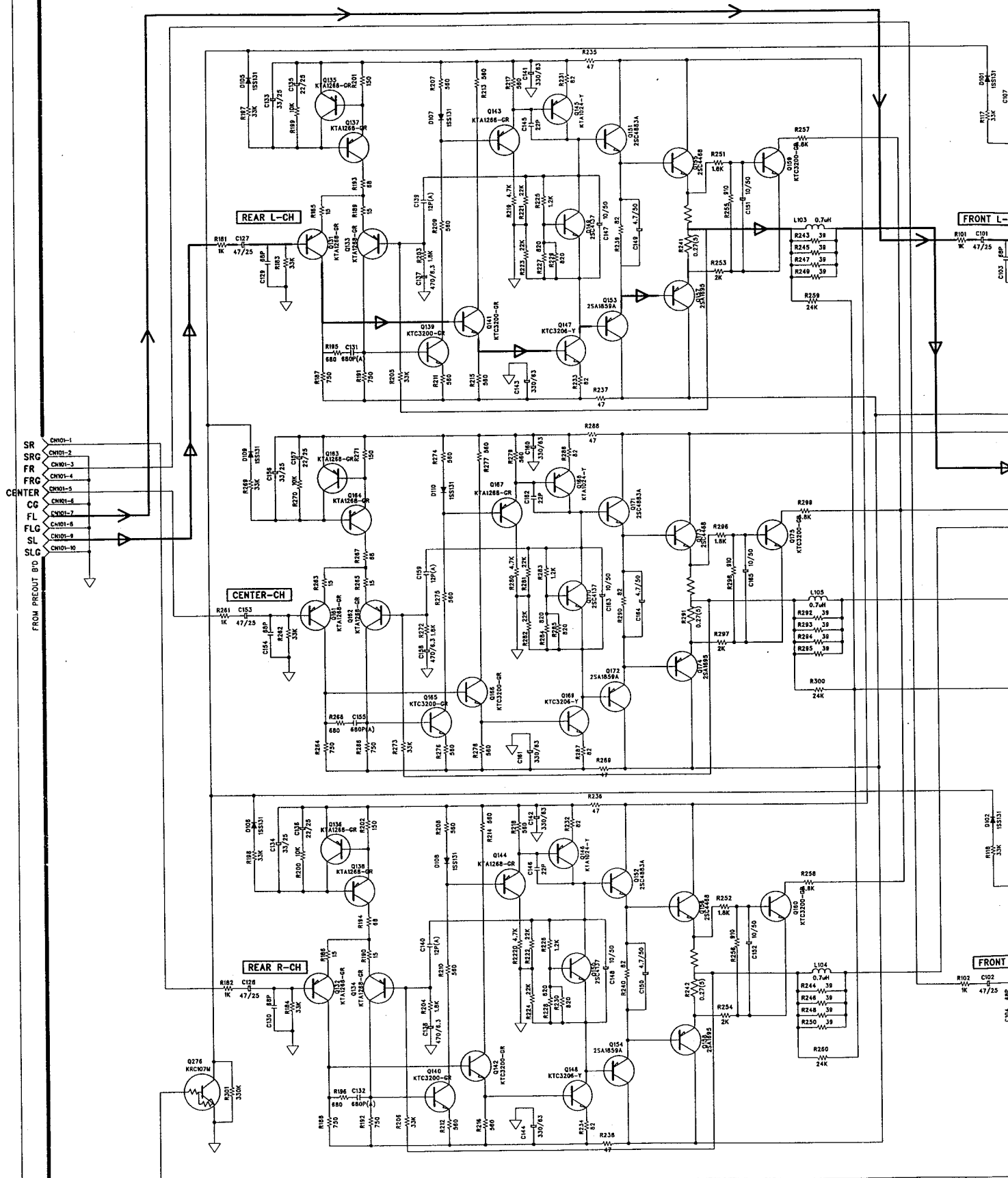


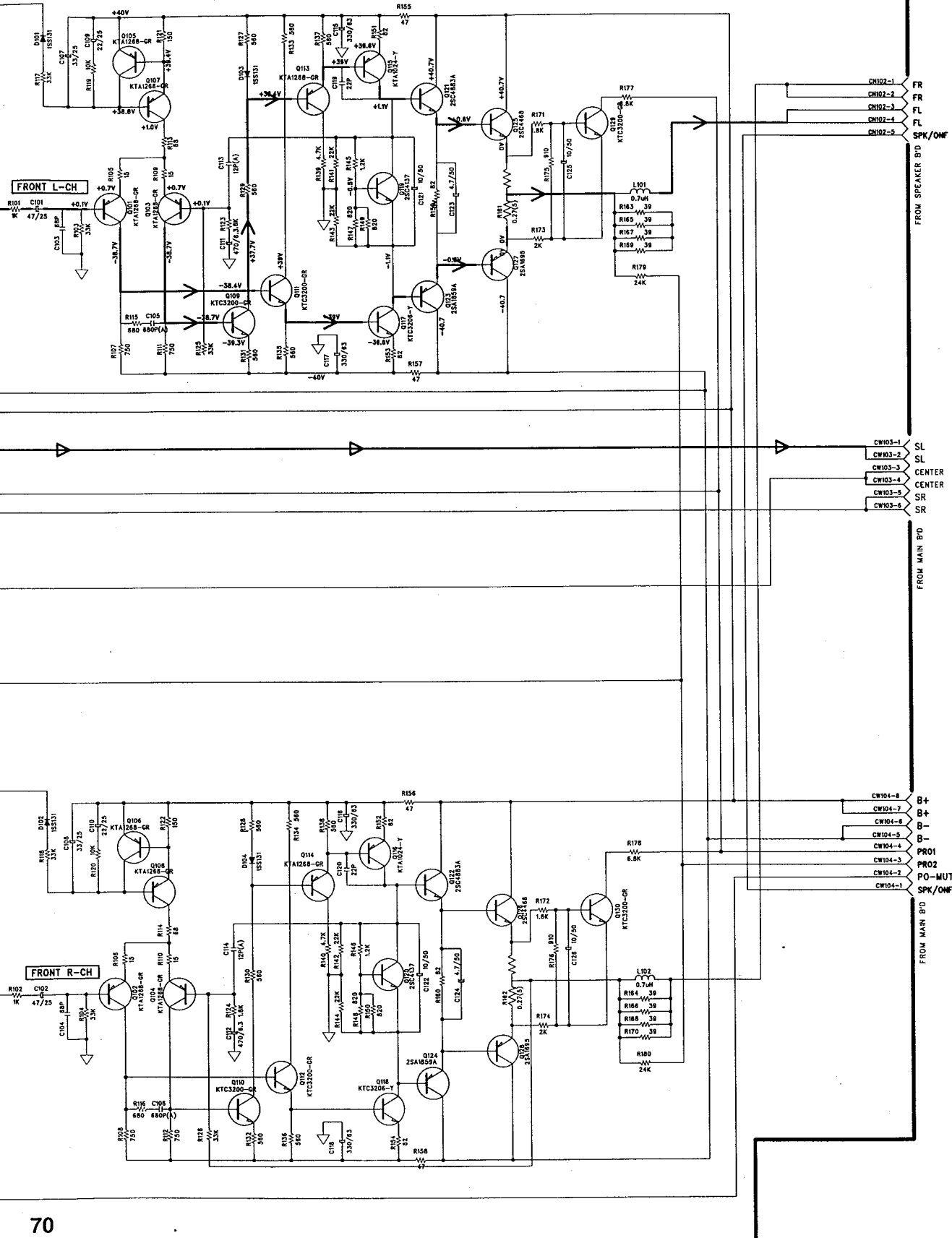
# SCHEMATIC DIAGRAM AMP BOARD

AVR5/AVR18RDS



# SCHEMATIC DIAGRAM AMP BOARD

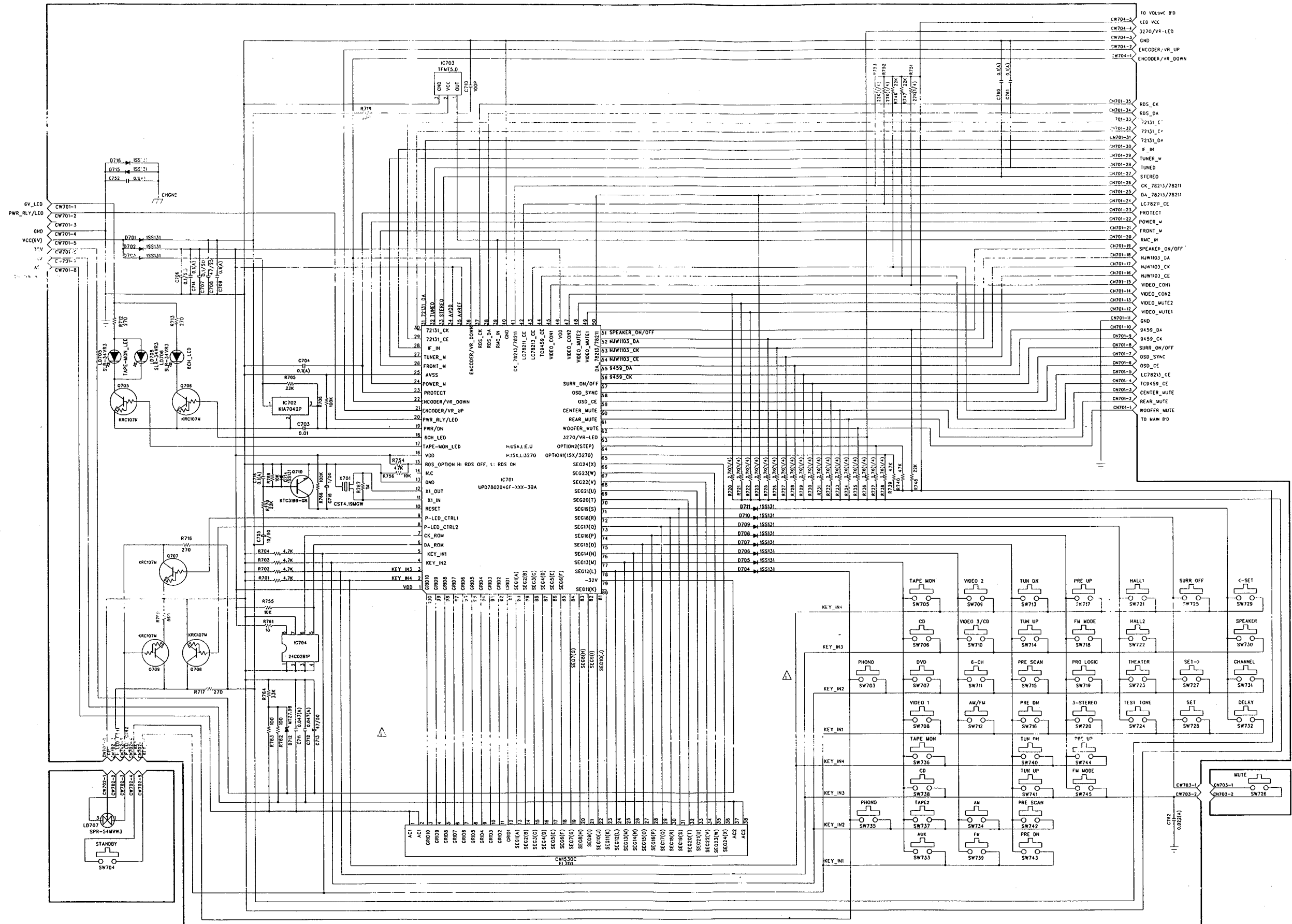




## SCHEMATIC DIAGRAM

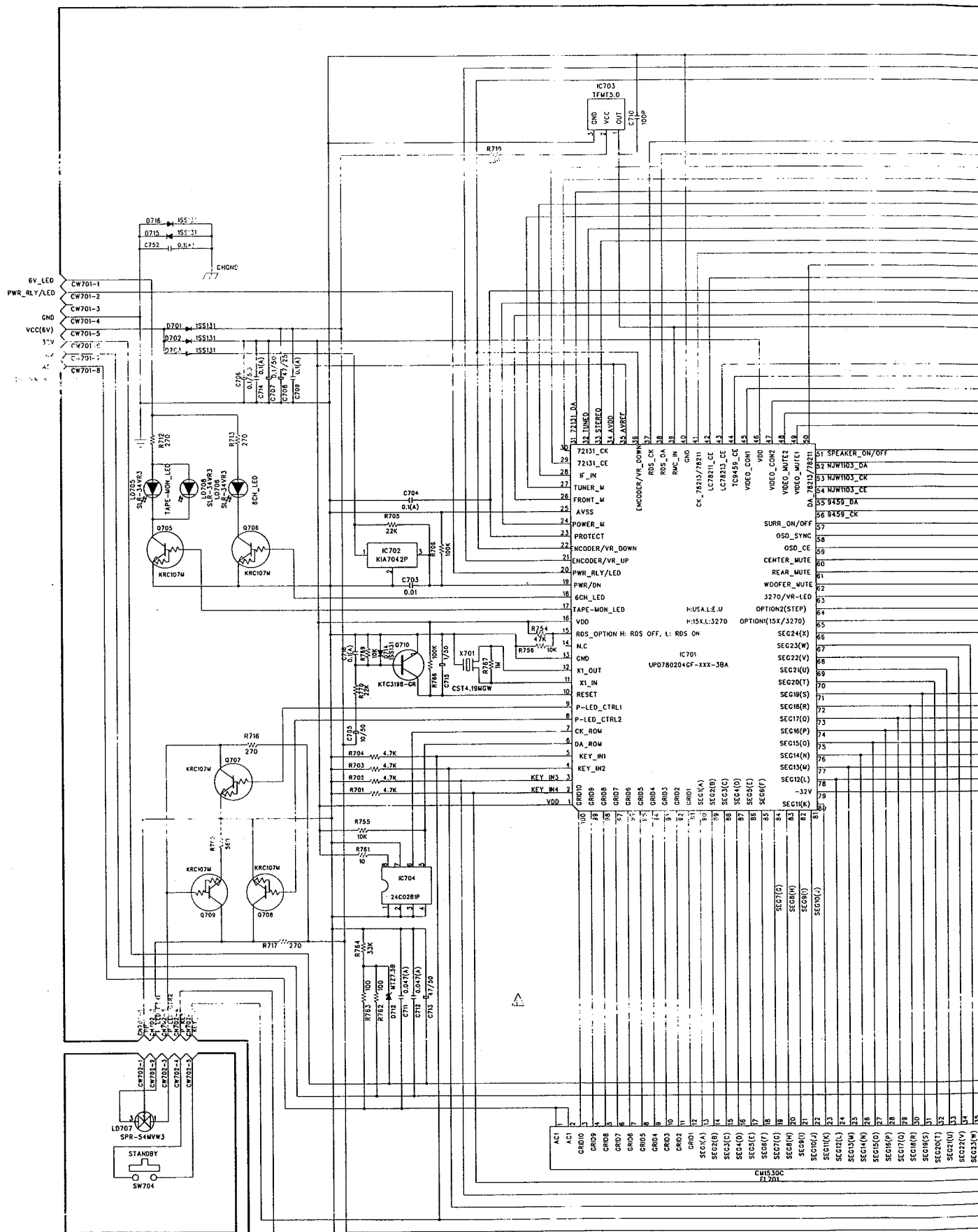
## FRONT BOARD

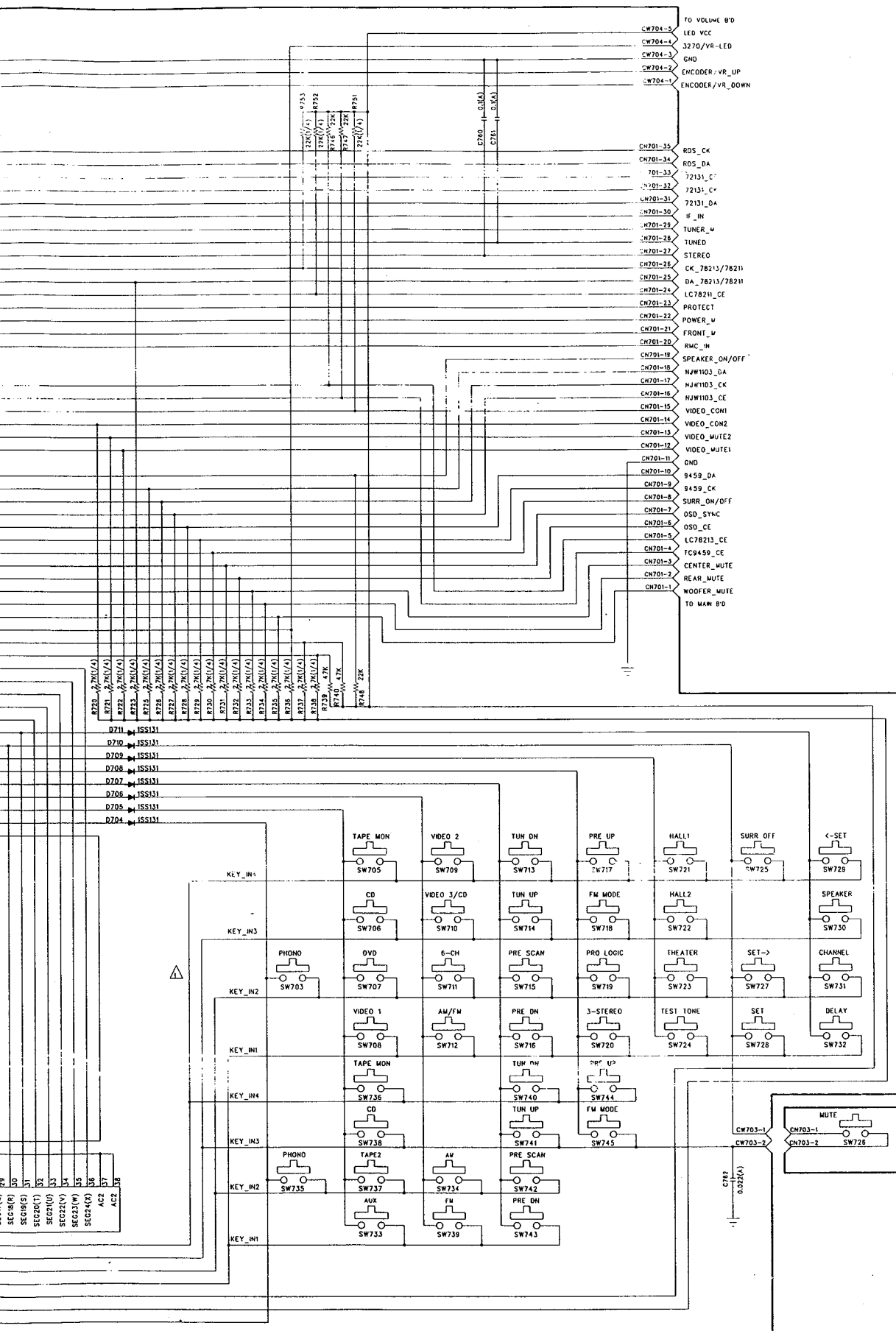
AVR5/AVR18RDS



## SCHEMATIC DIAGRAM

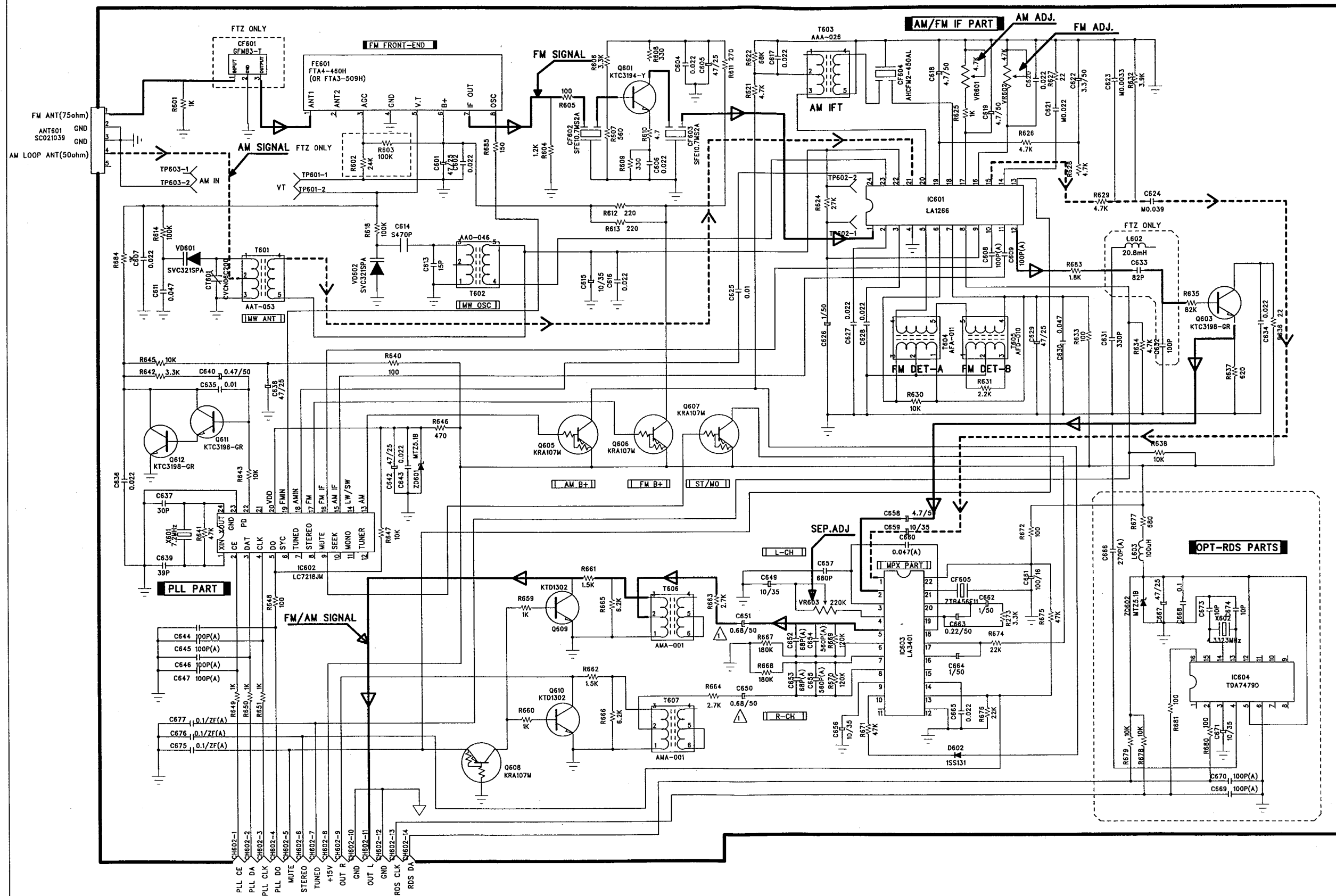
## FRONT BOARD





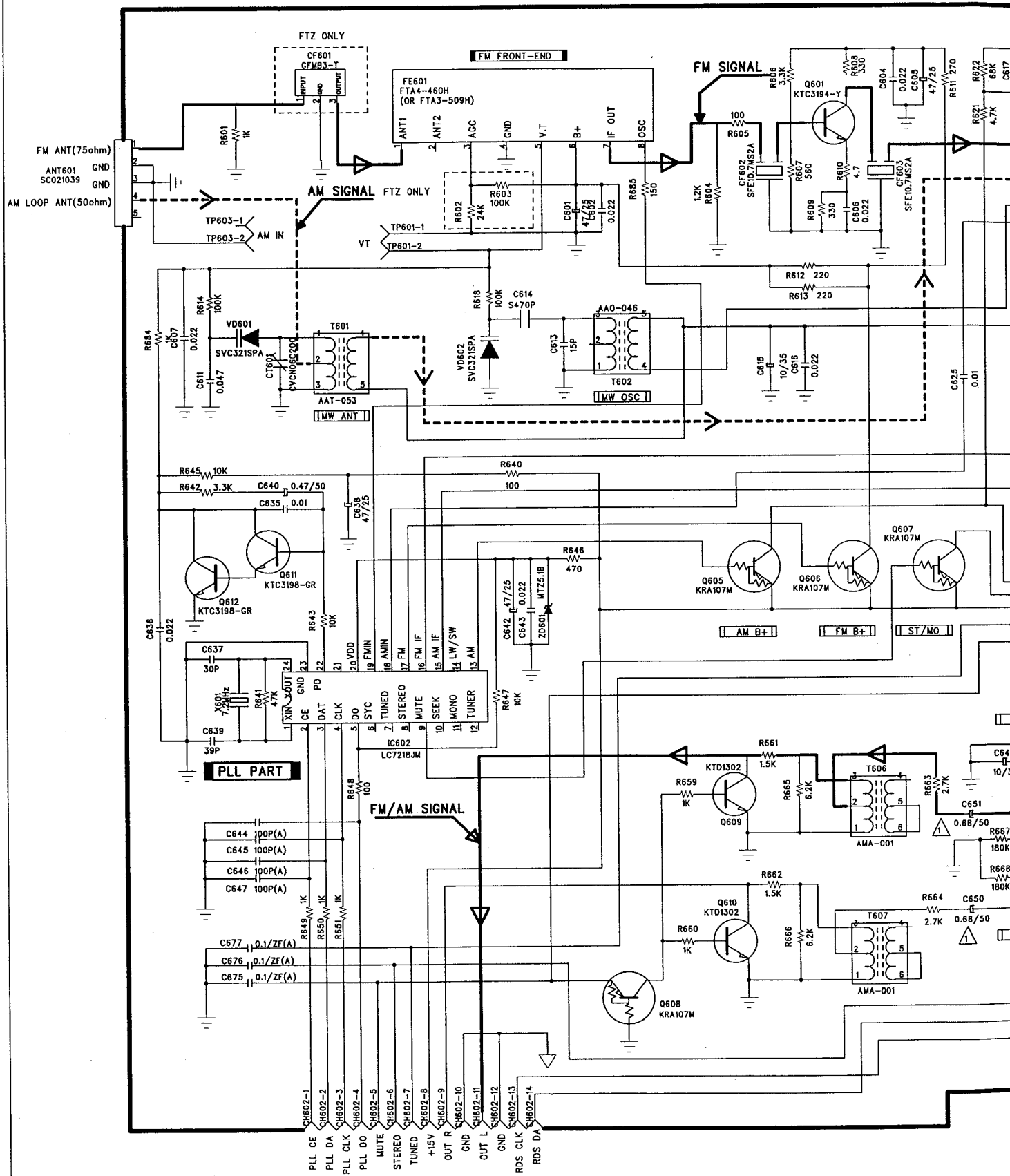
SCHEMATIC DIAGRAM  
TUNER BOARD

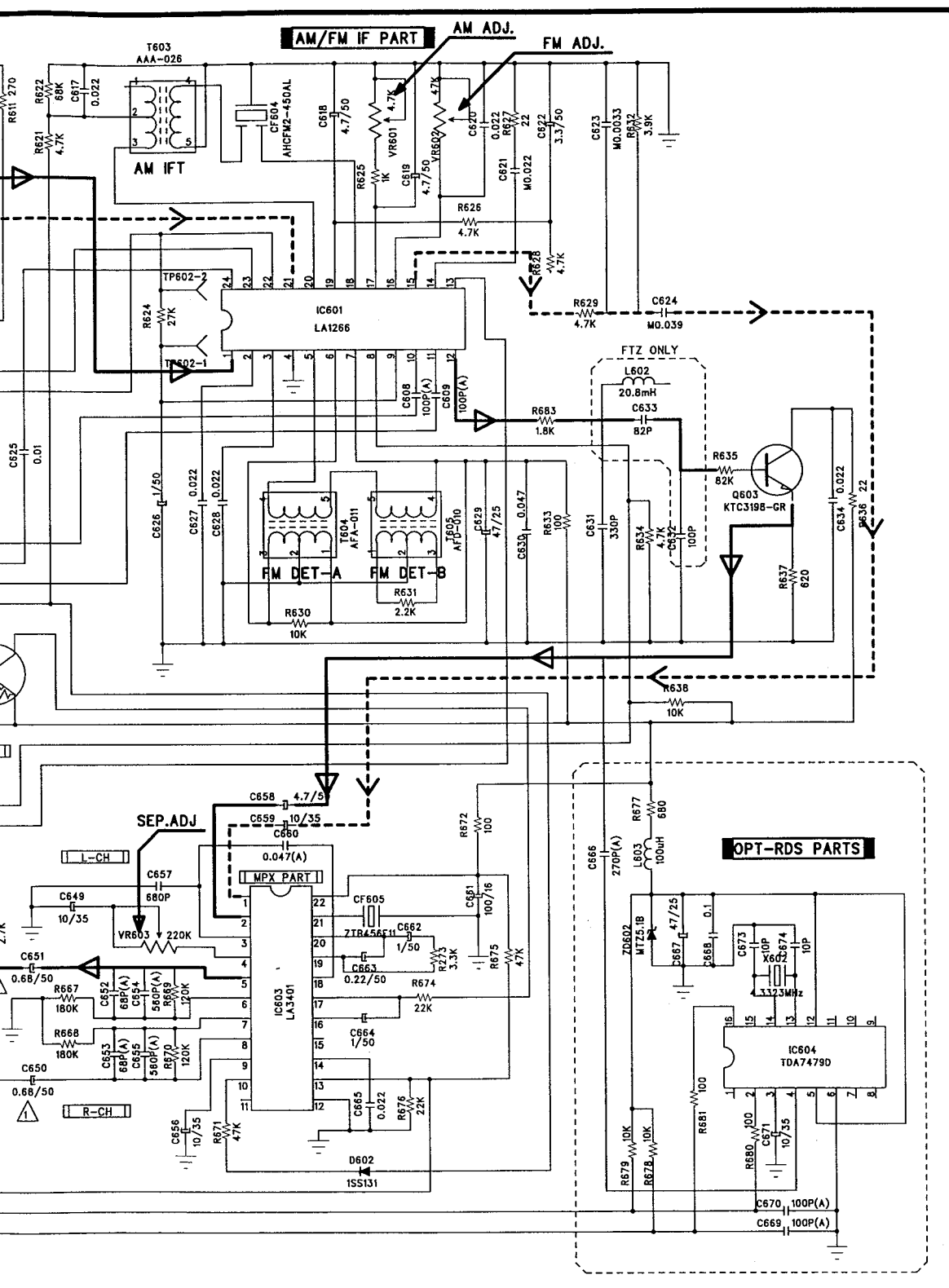
AVR5/AVR18RDS





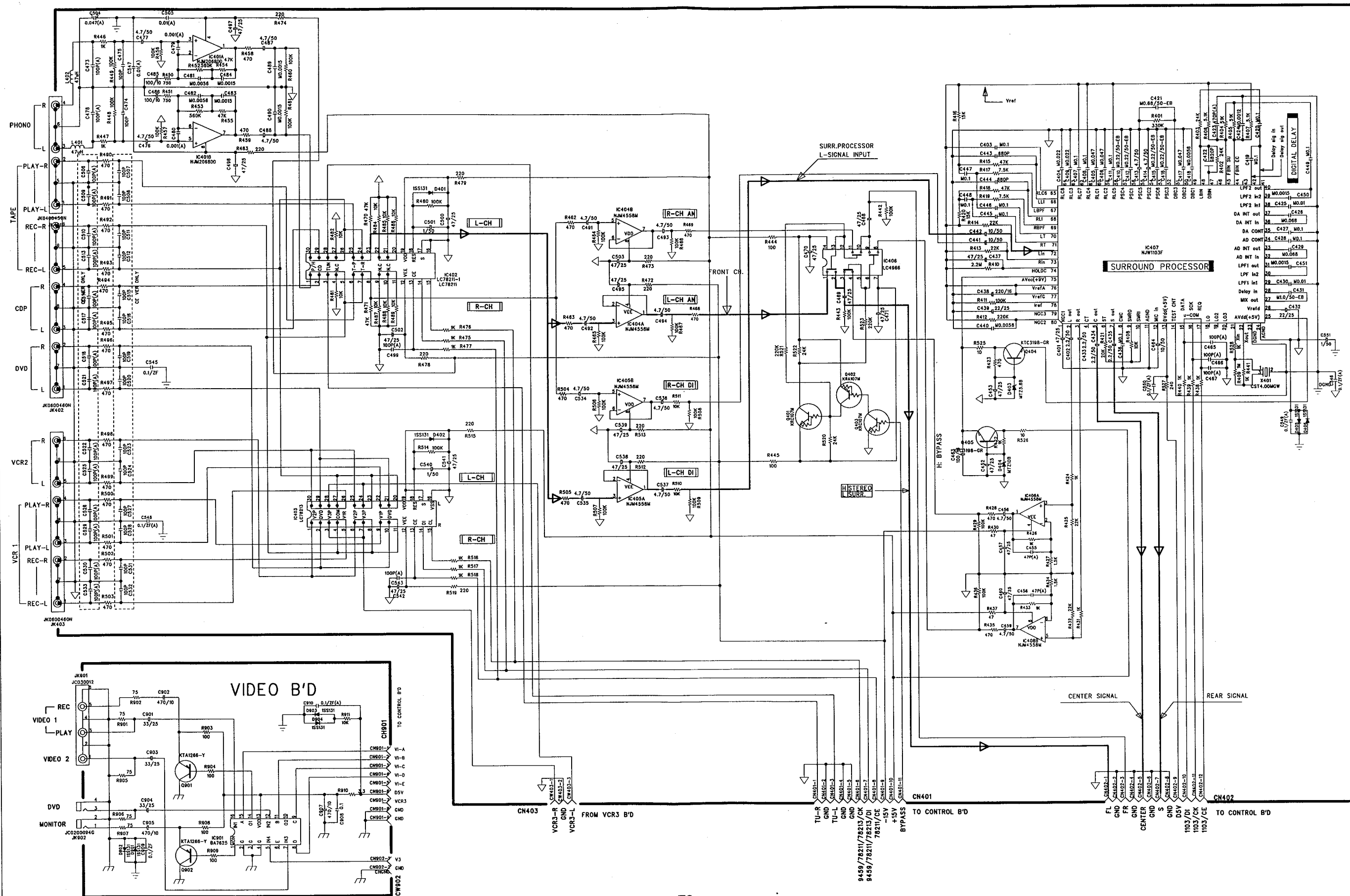
# SCHEMATIC DIAGRAM TUNER BOARD

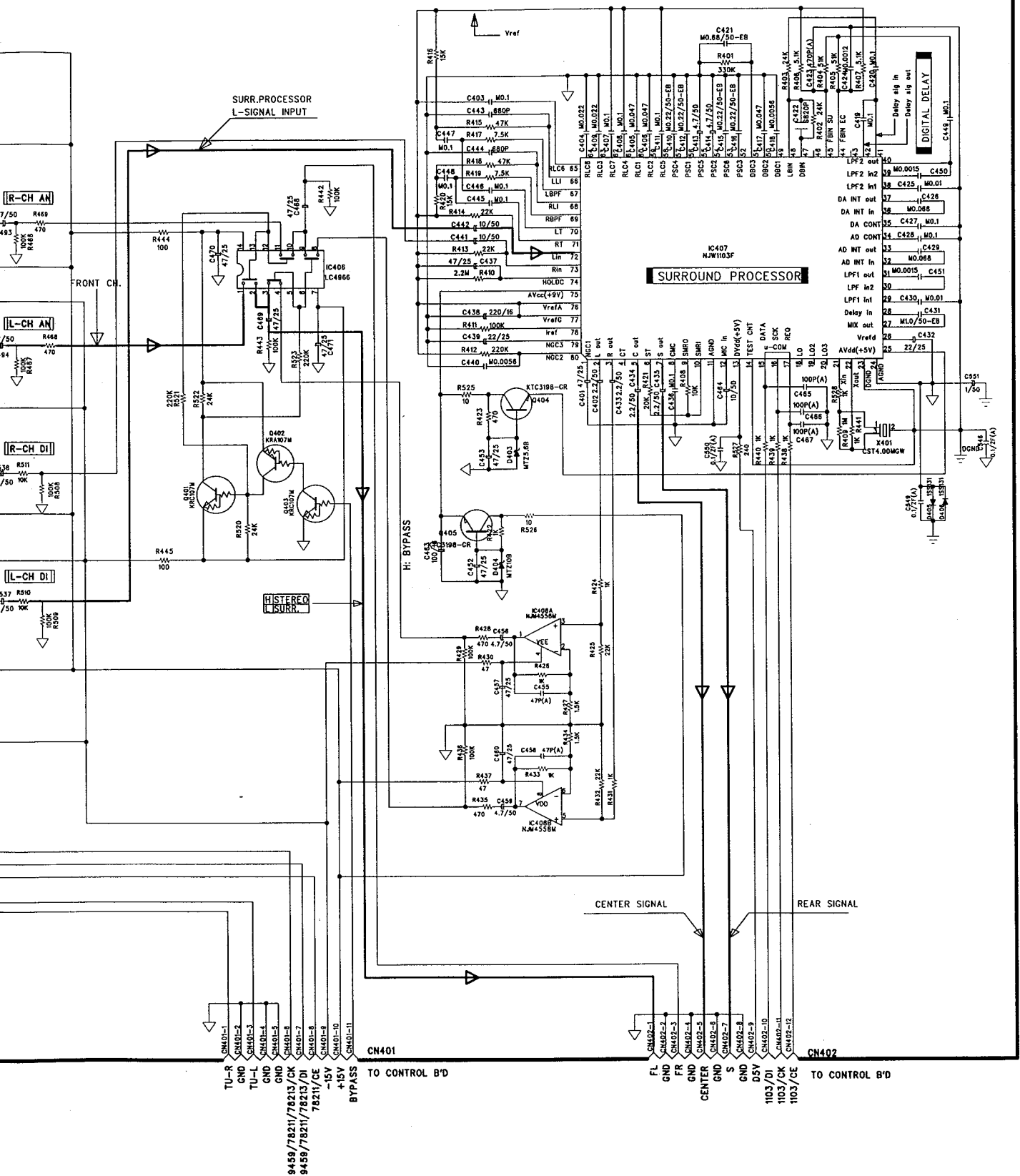




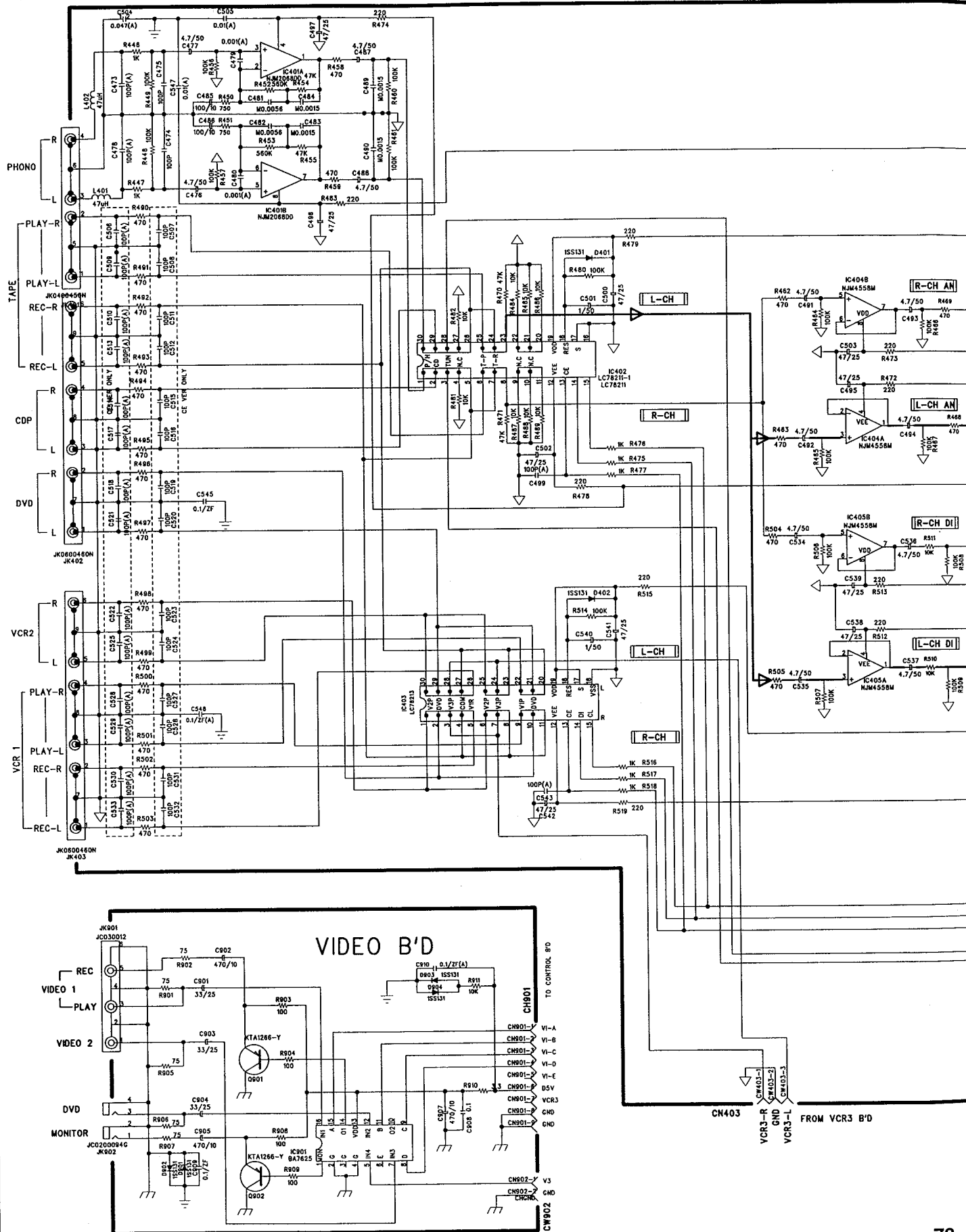
# SCHEMATIC DIAGRAM INPUT & VIDEO BOARD

AVR5/AVR18RDS

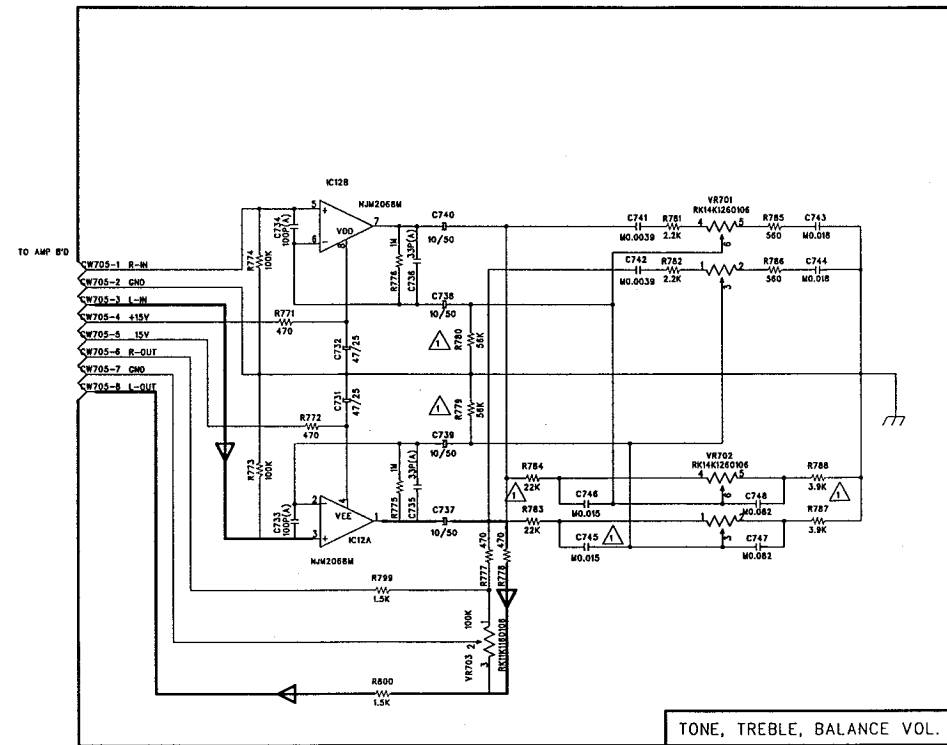




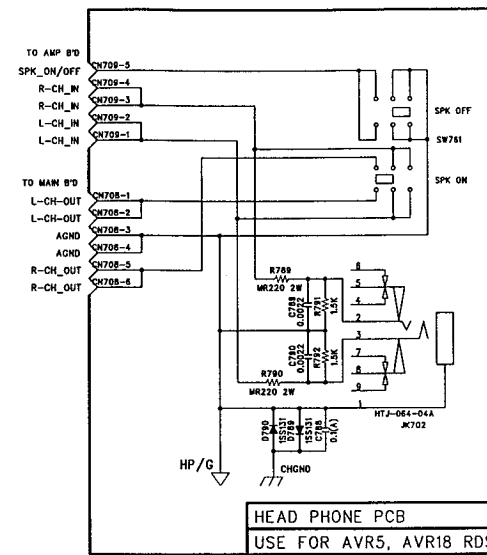
# SCHEMATIC DIAGRAM INPUT & VIDEO BOARD



TONE BOARD



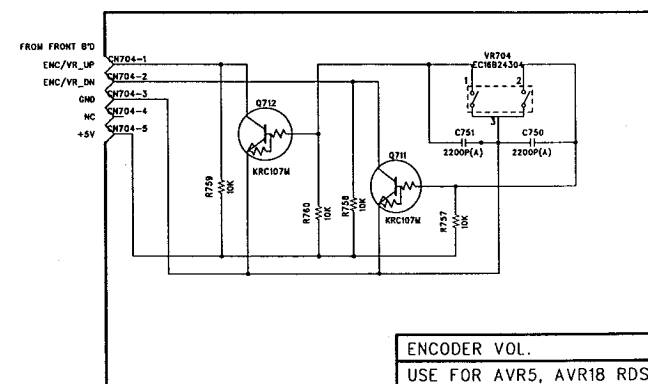
HEAD PHONE BOARD



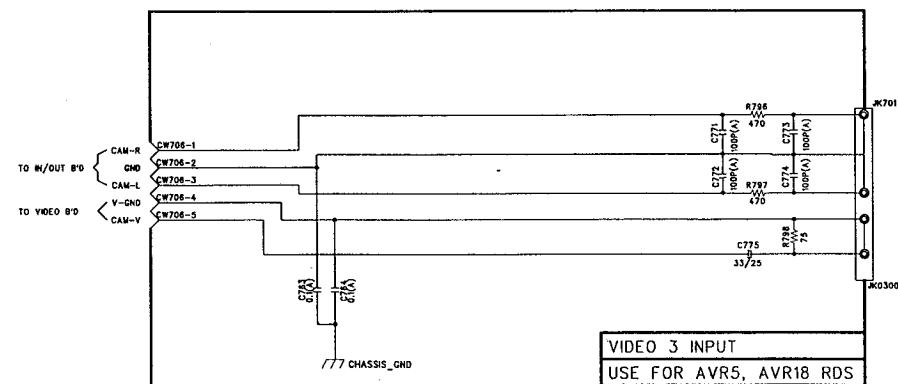
\*DESTINATION OPTION

| LOC. NO.    | USA | EUROPE |
|-------------|-----|--------|
| R791, R792  | X   | 0      |
| C771 - C774 | X   | 0      |
| C789, C790  |     |        |

ENCODER VOL BOARD

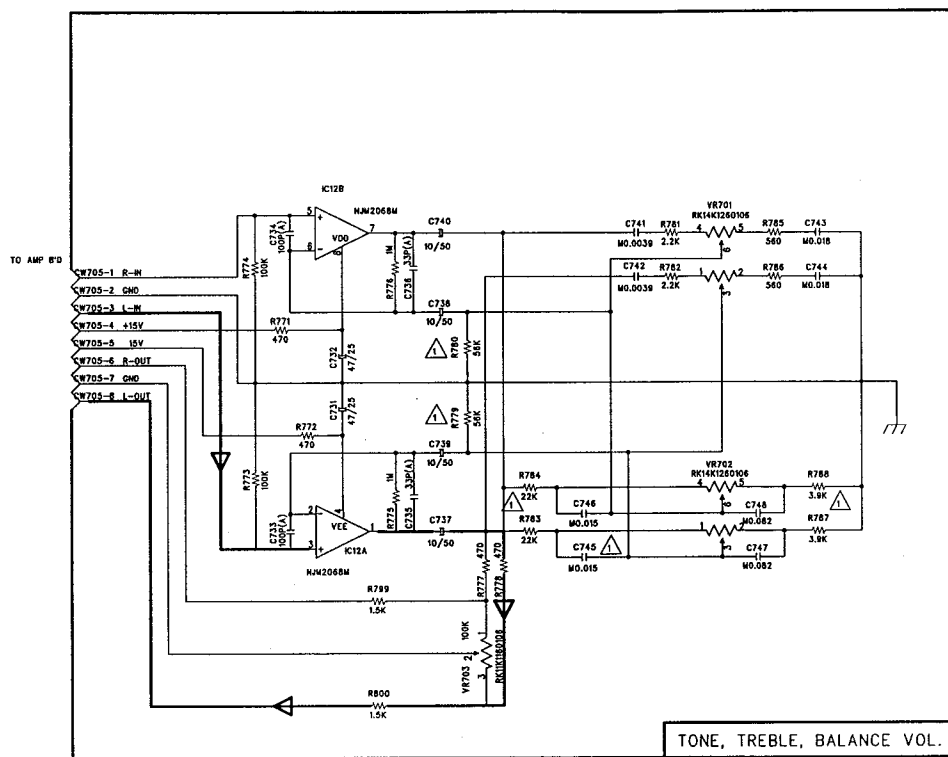


VIDEO 3 INPUT BOARD

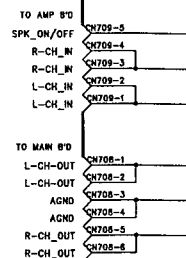


## SCHEMATIC DIAGRAM

## TONE BOARD

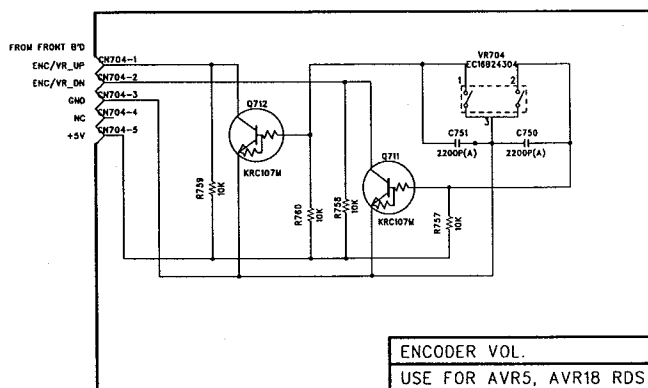


## HEAD

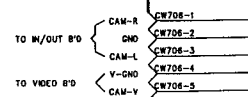


HP

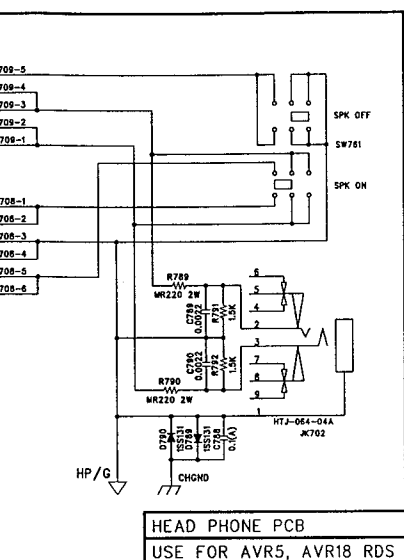
## ENCODER VOL BOARD



## VIDEO



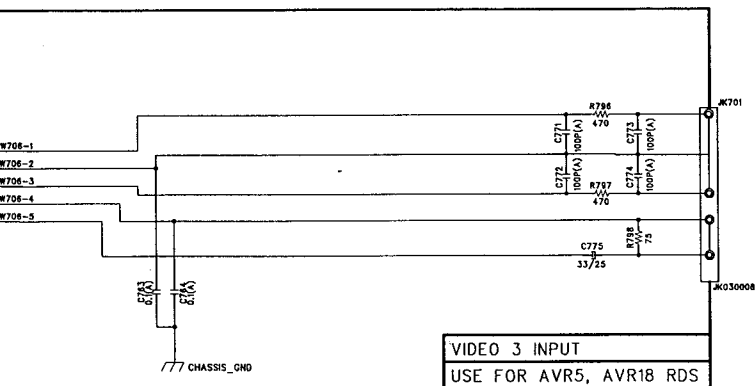
# HEAD PHONE BOARD



## \*DESTINATION OPTION

| LOC. NO.    | USA | EUROPE |
|-------------|-----|--------|
| R791, R792  | X   | 0      |
| C771 - C774 | X   | 0      |
| C789, C790  | X   | 0      |

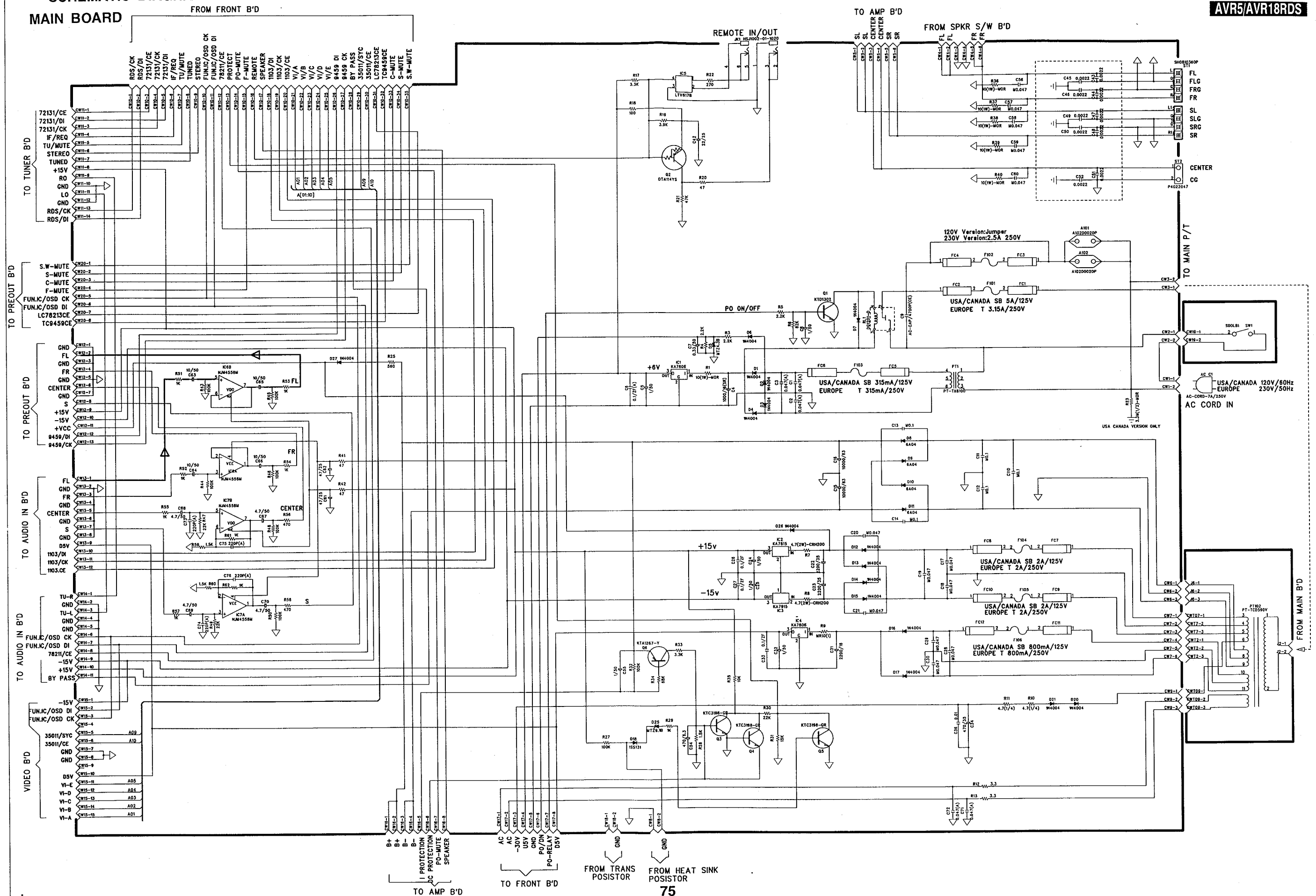
# VIDEO 3 INPUT BOARD



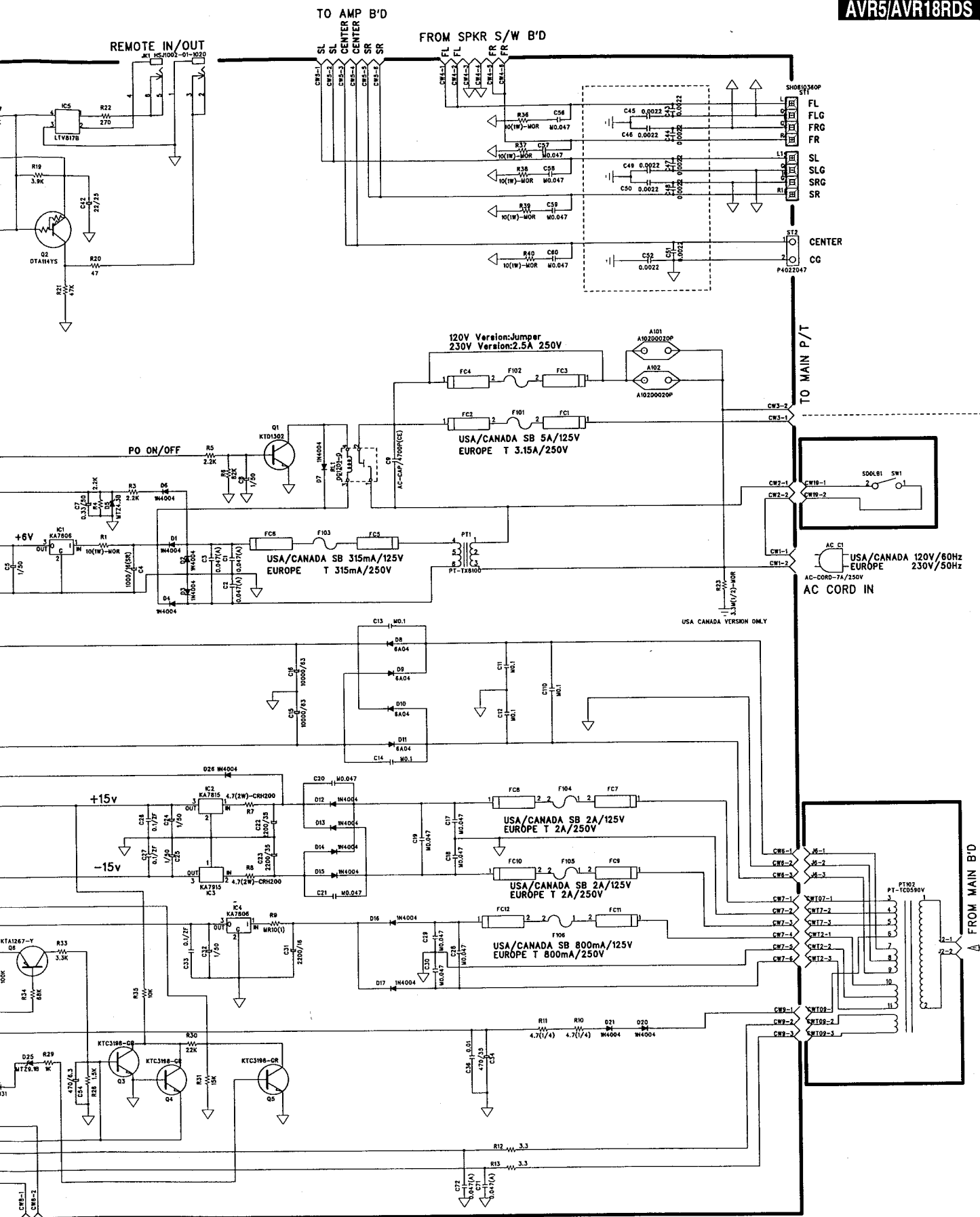


## MAIN BOARD

FROM FRONT B'D

**AVR5/AVR18RDS**

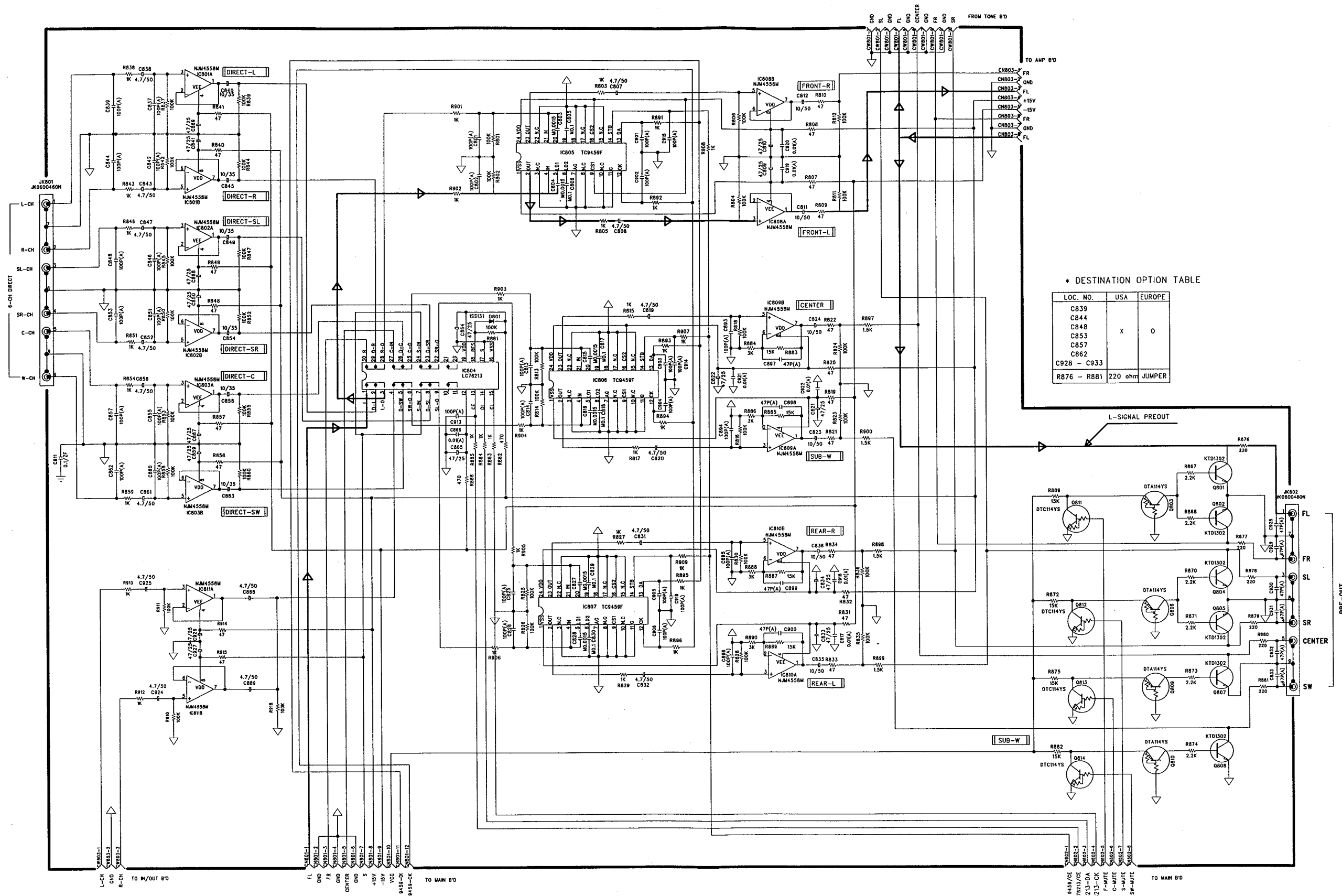




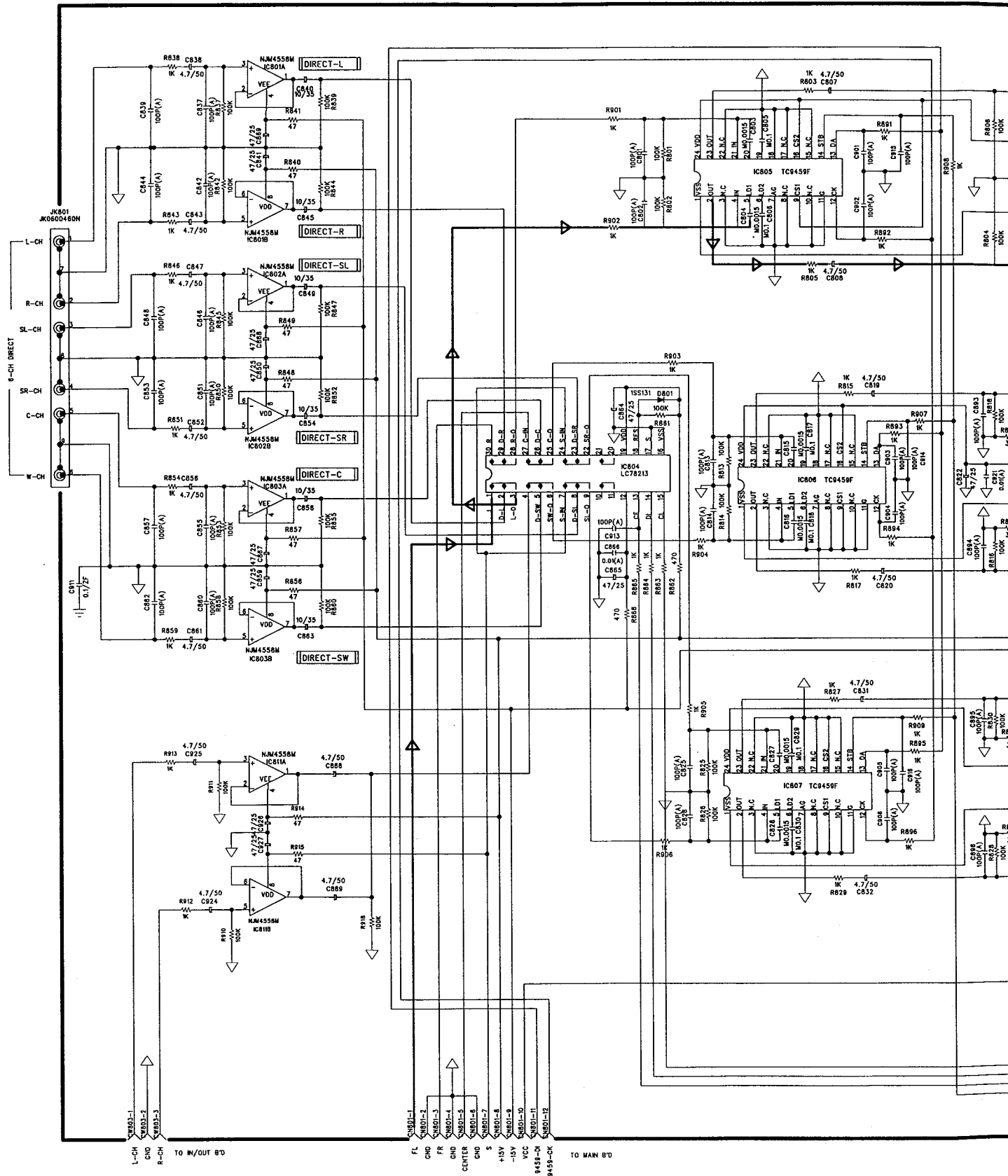
## SCHEMATIC DIAGRAM

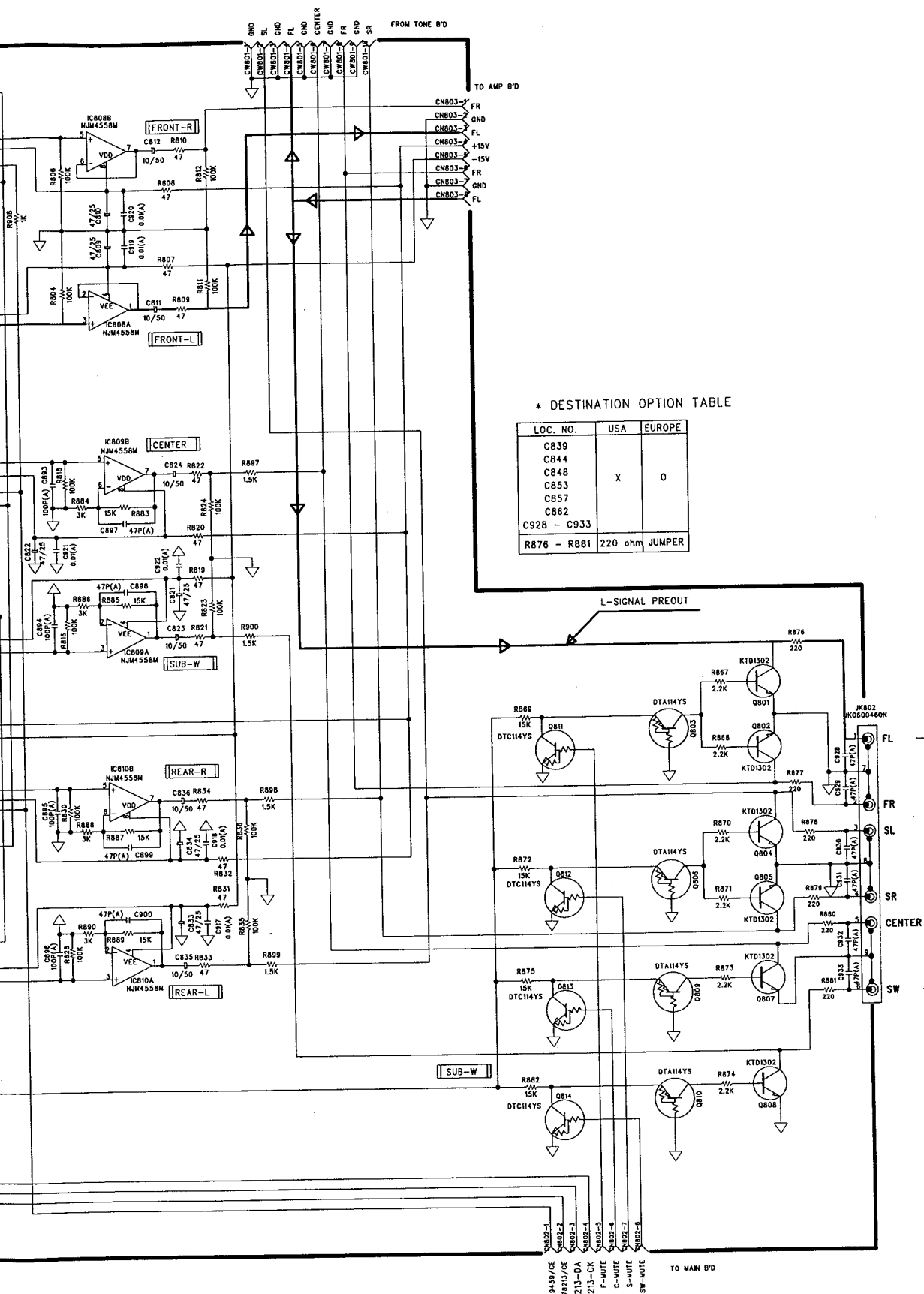
## PREOUT BOARD

AVR5/AVR18RDS



# SCHEMATIC DIAGRAM PREOUT BOARD



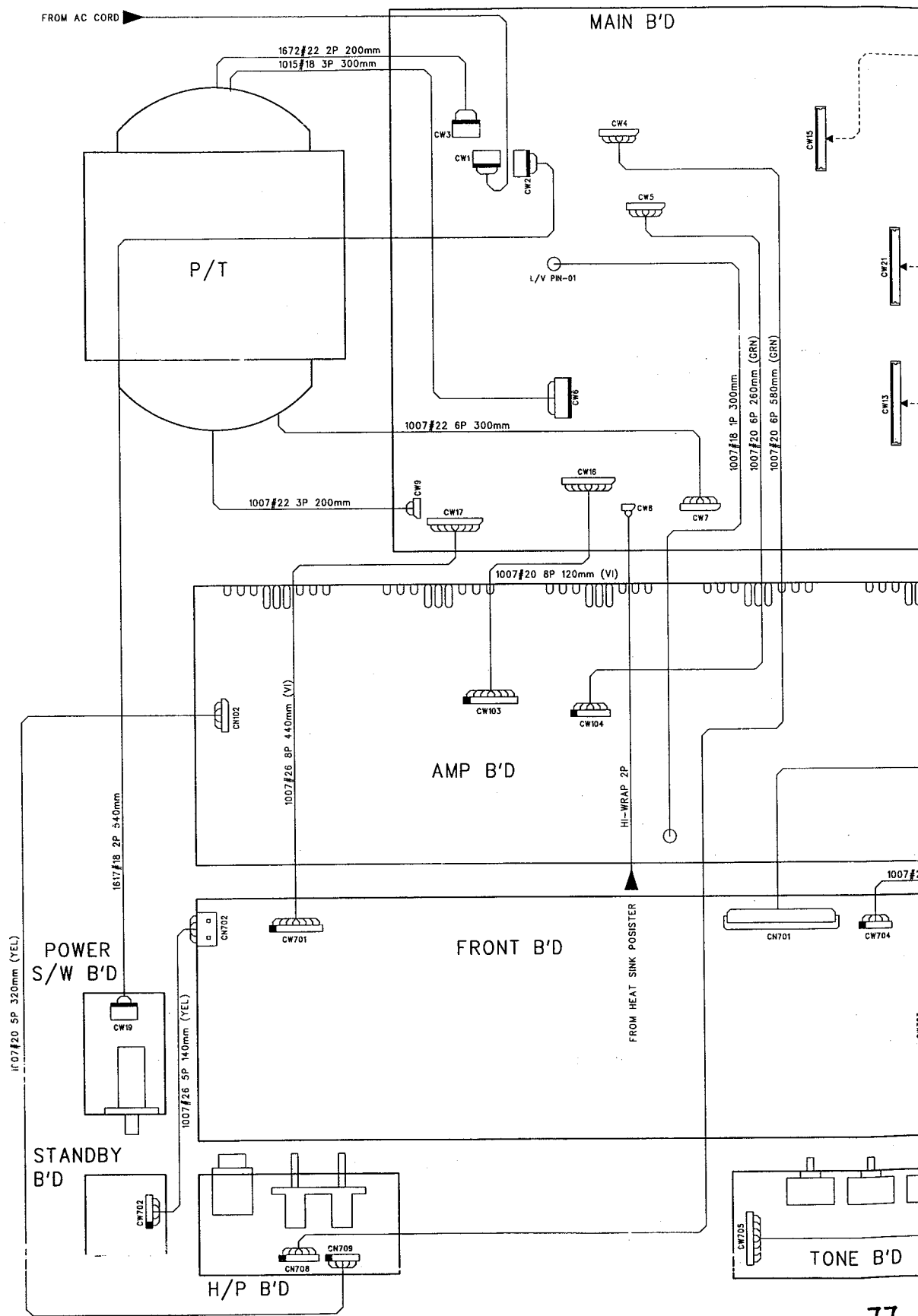


\* DESTINATION OPTION TABLE

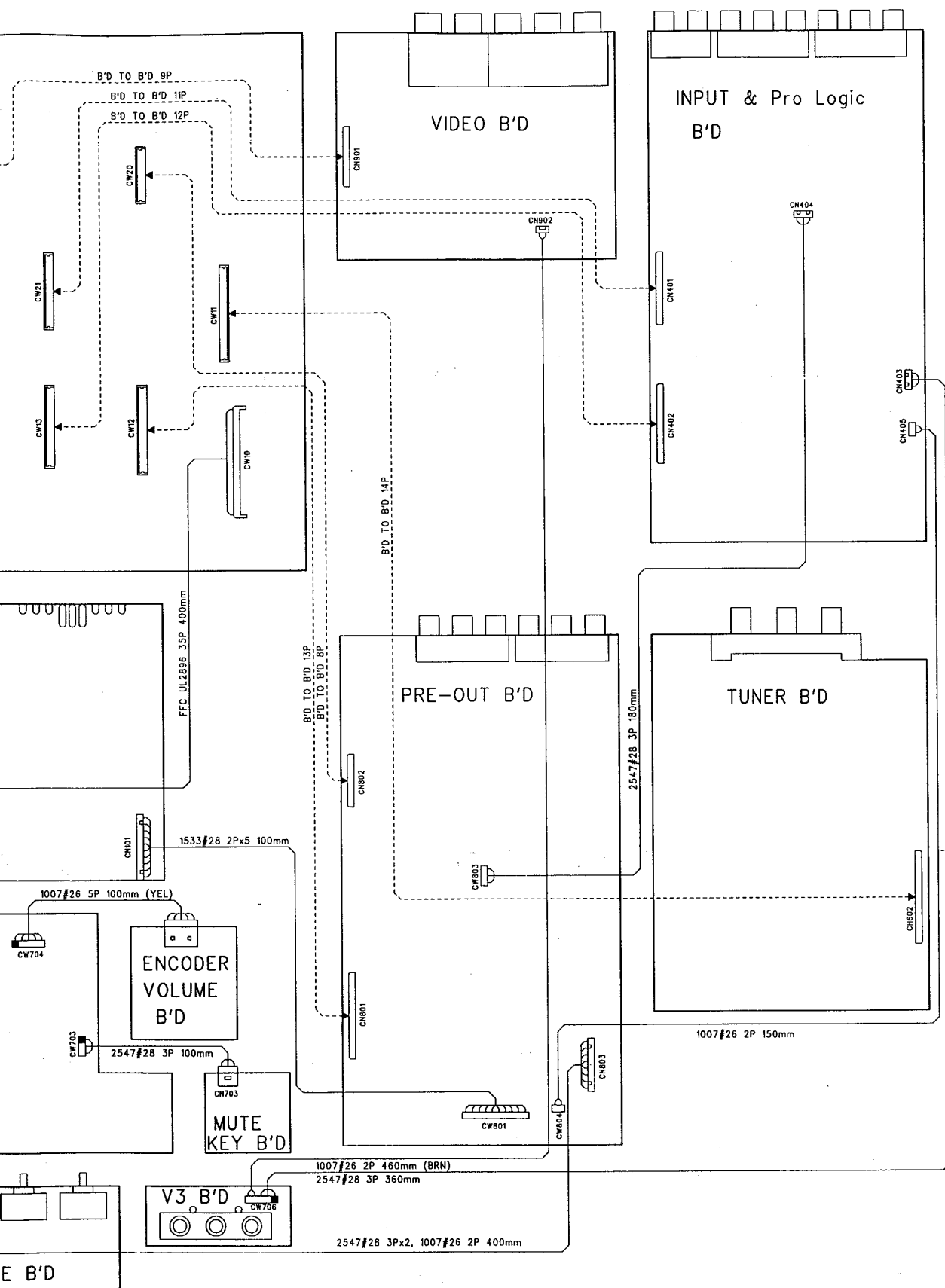
| LOC. NO.    | USA     | EUROPE |
|-------------|---------|--------|
| C839        |         |        |
| C844        |         |        |
| C848        | X       | O      |
| C853        |         |        |
| C857        |         |        |
| C862        |         |        |
| C928 - C933 |         |        |
| R876 - R881 | 220 ohm | JUMPER |



# WIRING DIAGRAM

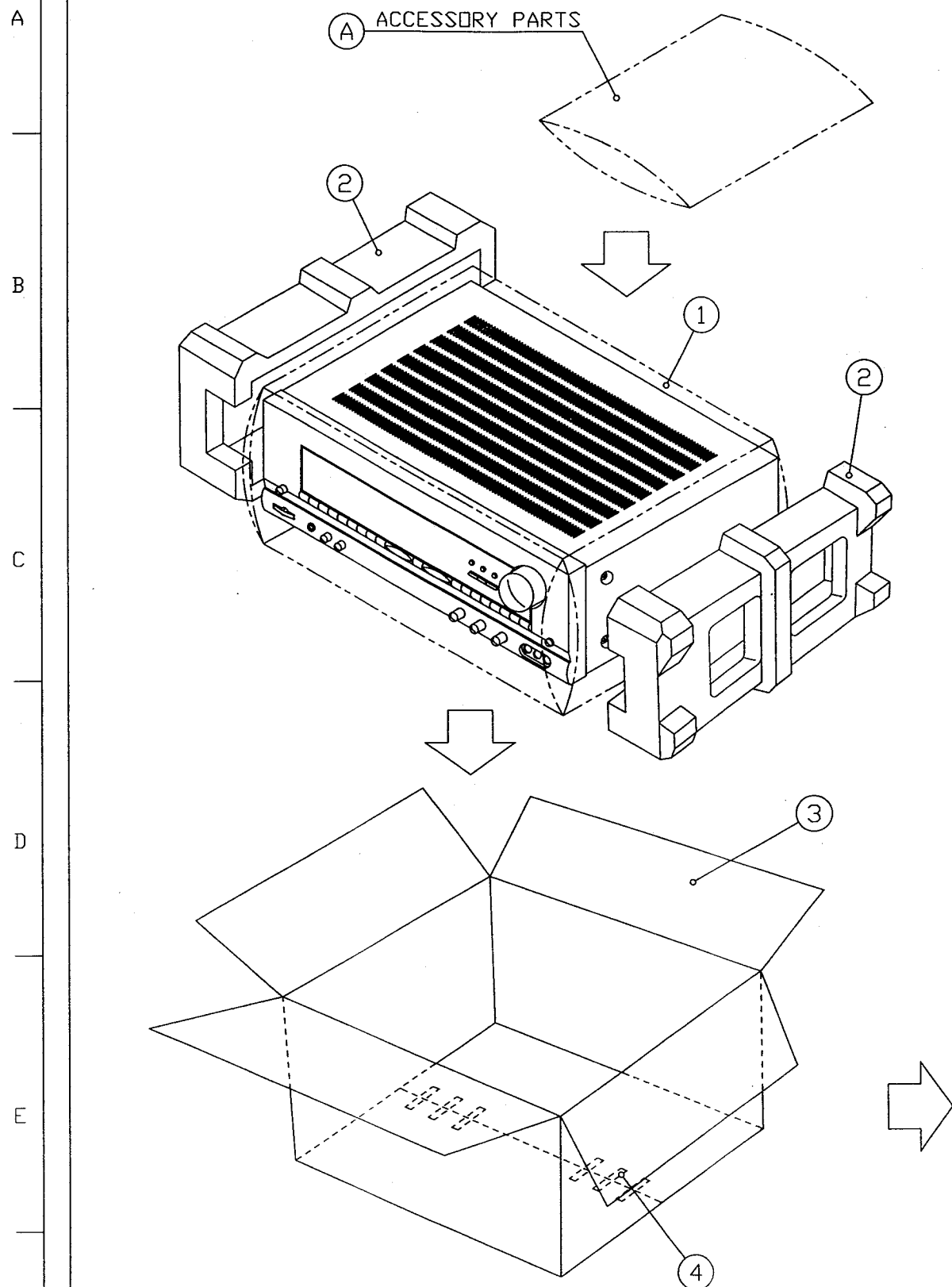






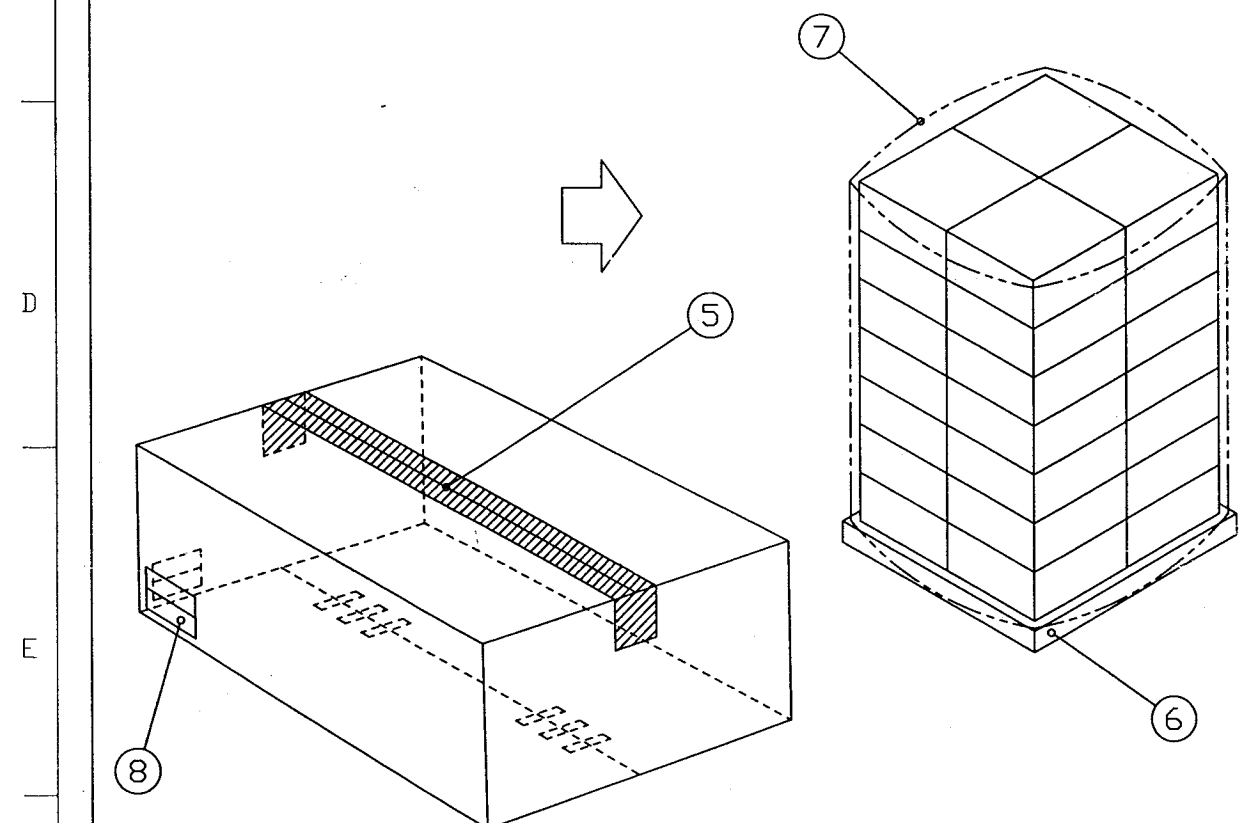
AVR5 only

# PACKING MATERIAL



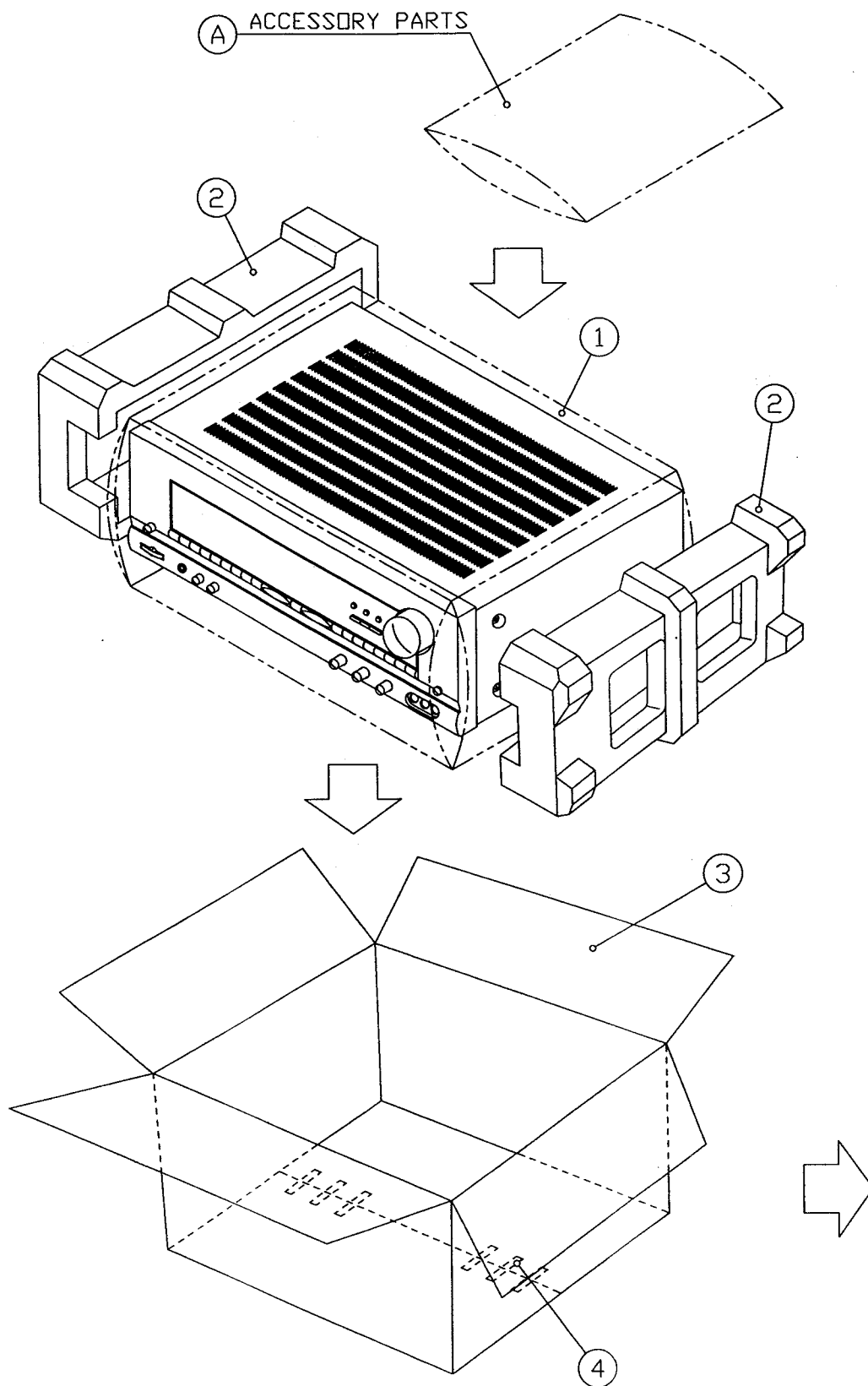
# PACKING MATERIAL

| NO | PARTS NAME           | PART NO        | Q'TY | REMARK |
|----|----------------------|----------------|------|--------|
| A  | POLY-BAG-IG          | YVAP-01862-ZZ4 | 1    | ***    |
|    | INST-MANUAL          | YIAR-I2000-ZZA | 1    | ***    |
|    | REMOTE CONTROL       | ACRC-0055J-000 | 1    | ***    |
|    | WARRANTY CARD        | YWAR-I2000-ZZA | 1    | ***    |
|    | BATTERY              | ***            | 2    | ***    |
|    | FM-ANTENNA           | ANNT-00054-075 | 1    | ***    |
|    | AM-ANTENNA           | ANTL-00060-E50 | 1    | ***    |
|    | MATCHING TRANSFORMER | TFMA-00100-D00 | 1    | ***    |
| 1  | TOILDN-SHEET         | YVAP-13320-ZZ4 | 1    | ***    |
| 2  | CUSHION-L/R          | YSAP-12070-002 | 2    | EPS    |
| 3  | BOX-GIFT             | YGAP-14250-ZZA | 1    | DW3    |
| 4  | AIR-STAPLES          | MMSC-00900-004 | 6    | STEEL  |
| 5  | OPP TAPE             | ***            | *    | ***    |
| 6  | PALLETS              | MWAW-00910-003 | *    | ***    |
| 7  | WRAP                 | 7JJG-00212-001 | *    | ***    |
| 8  | LABEL                | ***            | 4    | ***    |



**AVR5** only

## PACKING MATERIAL



ND

A

1

2

3

4

5

6

7

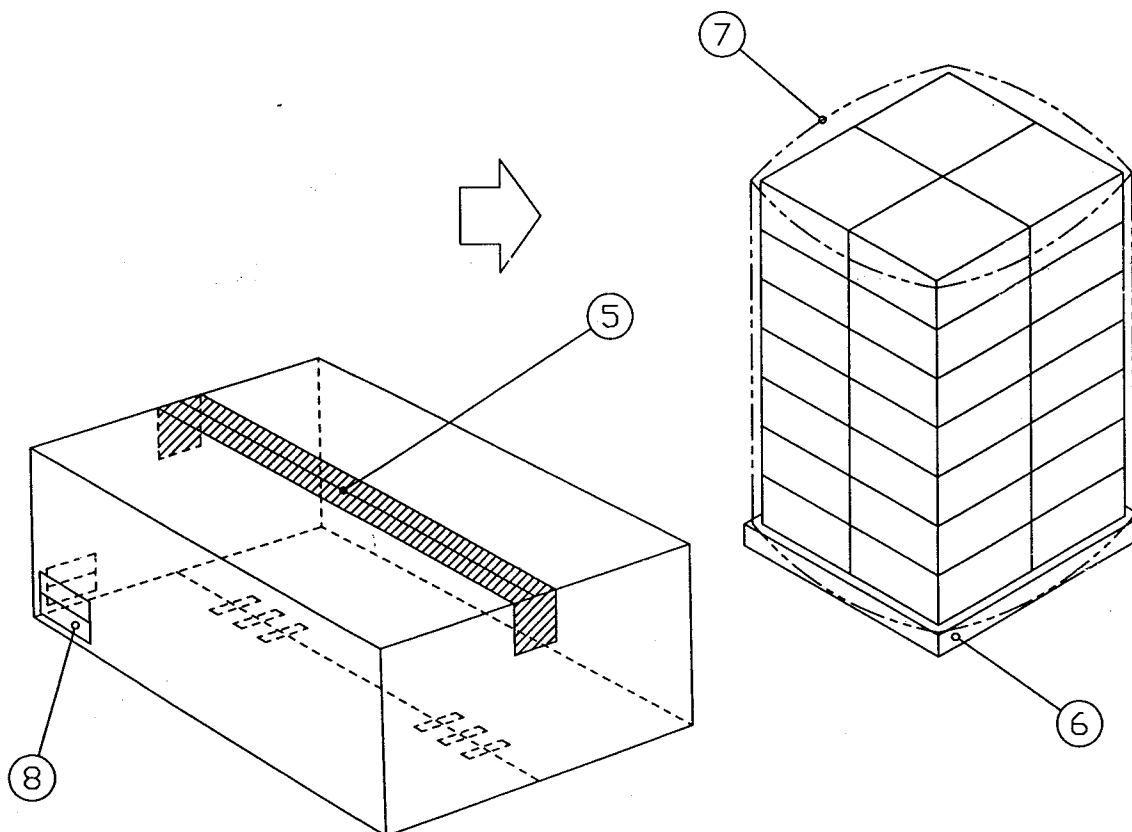
8

D

E

# PACKING MATERIAL

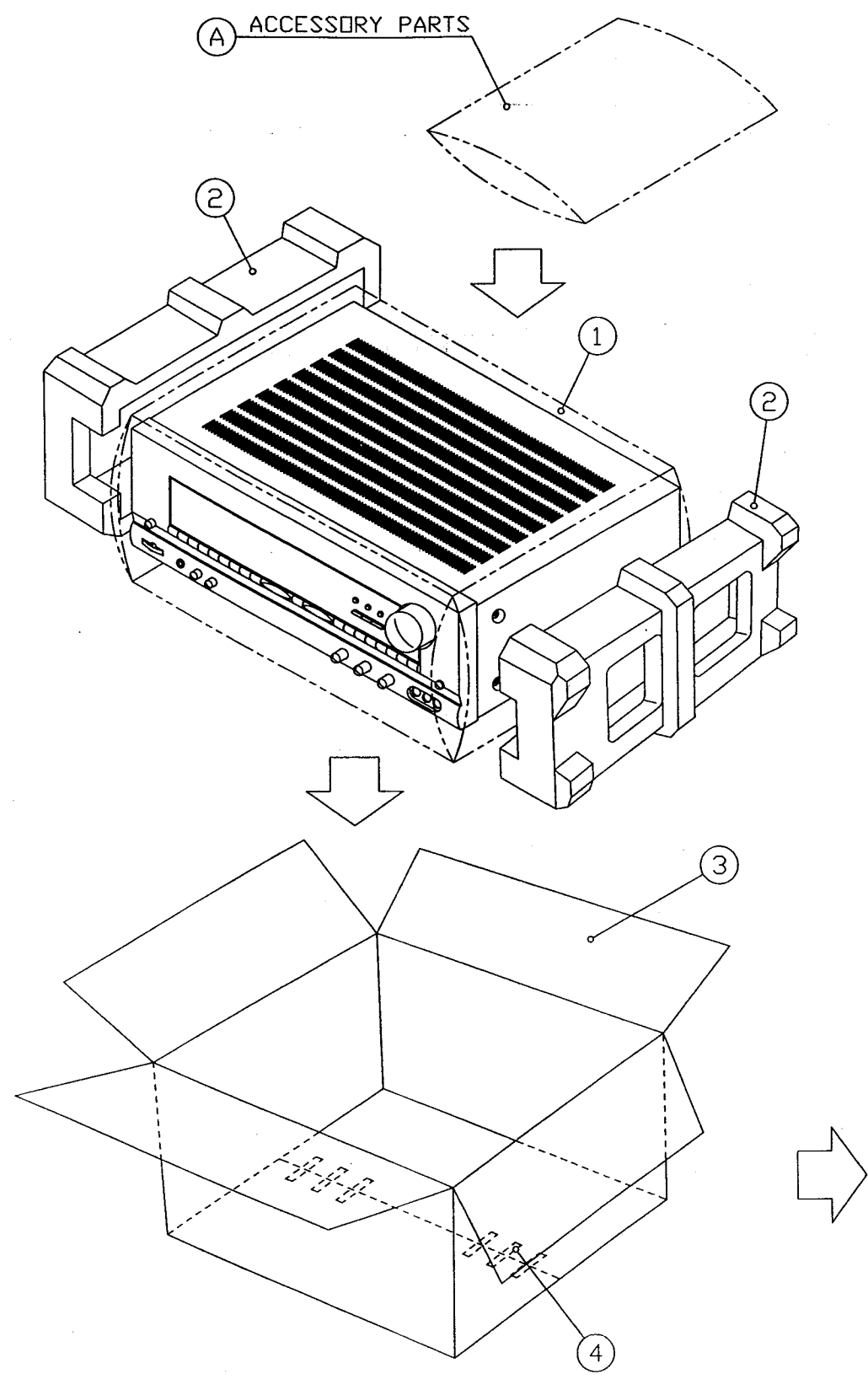
| NO | PARTS NAME           | PART NO        | Q'TY | REMARK |
|----|----------------------|----------------|------|--------|
| A  | POLY-BAG-IG)         | YVAP-01862-ZZ4 | 1    | ***    |
|    | INST-MANUAL          | YIAR-I2000-ZZA | 1    | ***    |
|    | REMOTE CONTROL       | ACRC-0055J-000 | 1    | ***    |
|    | WARRANTY CARD        | YWAR-I2000-ZZA | 1    | ***    |
|    | BATTERY              | ***            | 2    | ***    |
|    | FM-ANTENNA           | ANTT-00054-075 | 1    | ***    |
|    | AM-ANTENNA           | ANTL-00060-E50 | 1    | ***    |
|    | MATCHING TRANSFORMER | TFMA-00100-D00 | 1    | ***    |
| 1  | TOILON-SHEET         | YVAP-13320-ZZ4 | 1    | ***    |
| 2  | CUSHION-L/R          | YSAP-12070-002 | 2    | EPS    |
| 3  | BOX-GIFT             | YGAP-14250-ZZA | 1    | DW3    |
| 4  | AIR-STAPLES          | MMSC-00900-004 | 6    | STEEL  |
| 5  | OPP TAPE             | ***            | *    | ***    |
| 6  | PALLETS              | MWAW-00910-003 | *    | ***    |
| 7  | WRAP                 | 7JJG-00212-001 | *    | ***    |
| 8  | LABEL                | ***            | 4    | ***    |



AVR18RDS only

# PACKING MATERIAL

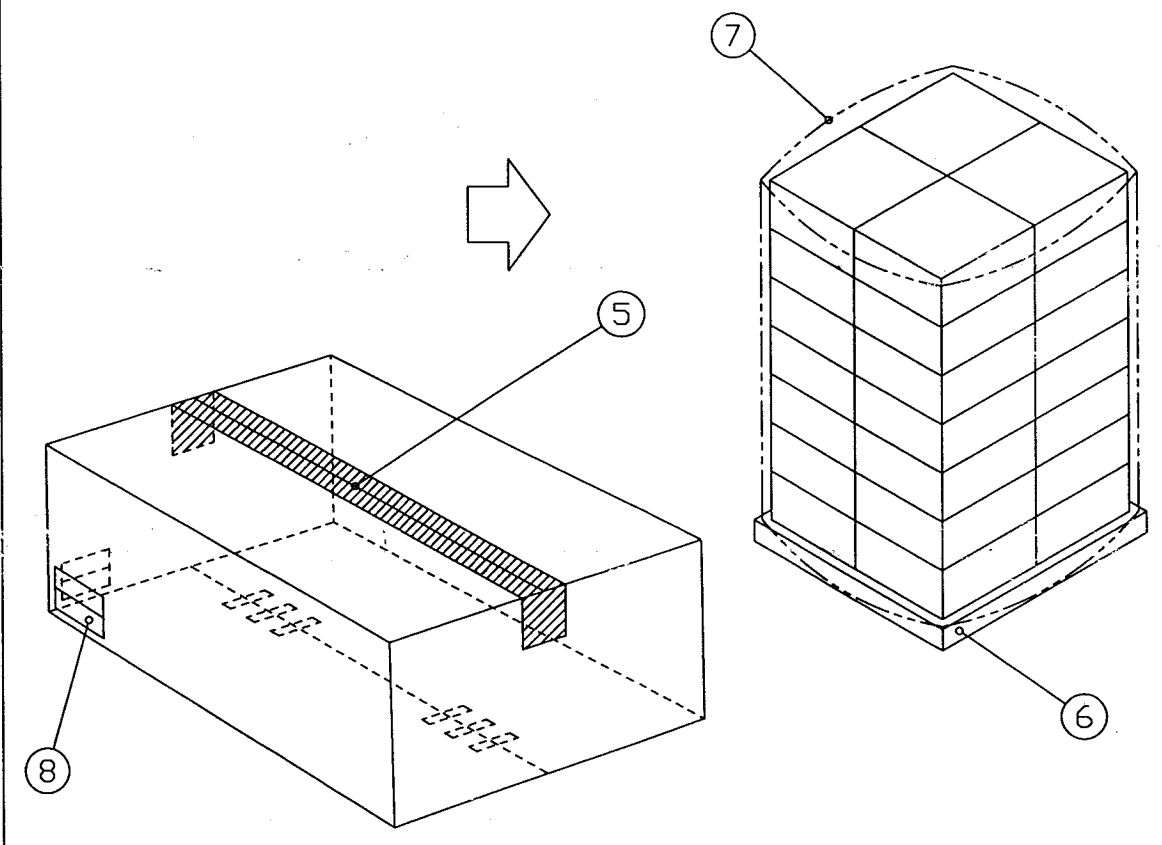
A  
B  
C  
D  
E



# PACKING MATERIAL

A  
B  
C  
D  
E

| NO | PARTS NAME    | PART NO        | Q'TY | REMARK |
|----|---------------|----------------|------|--------|
| A  | POLY-BAG-I(G) | YVAP-01862-ZZ4 | 1    | ***    |
|    | INST-MANUAL   | YIAR-I2001-ZZE | 1    | ***    |
|    | REMOTE CTRL   | ACRC-0056J-000 | 1    | ***    |
|    | WARRANTY CARD | YWAR-I2001-ZZA | 1    | ***    |
|    | BATTERY       | ***            | 2    | ***    |
|    | FM-ANTENNA    | ANTT-00090-075 | 1    | ***    |
|    | AM-ANTENNA    | ANTL-00060-E50 | 1    | ***    |
| 1  | TOILON-SHEET  | YVAP-13320-ZZ4 | 1    | ***    |
| 2  | CUSHION-L/R   | YSAP-1207C-002 | 2    | EPS    |
| 3  | BOX-GIFT      | YGAP-14250-ZZA | 1    | DW3    |
| 4  | AIR-STAPLES   | MMSC-00900-004 | 6    | STEEL  |
| 5  | OPP TAPE      | ***            | *    | ***    |
| 6  | PALLETS       | MWAW-00910-003 | *    | ***    |
| 7  | WRAP          | 7JJG-00212-001 | *    | ***    |
| 8  | LABEL         | ***            | 4    | ***    |



AVR18RDS only

## PACKING MATERIAL

A

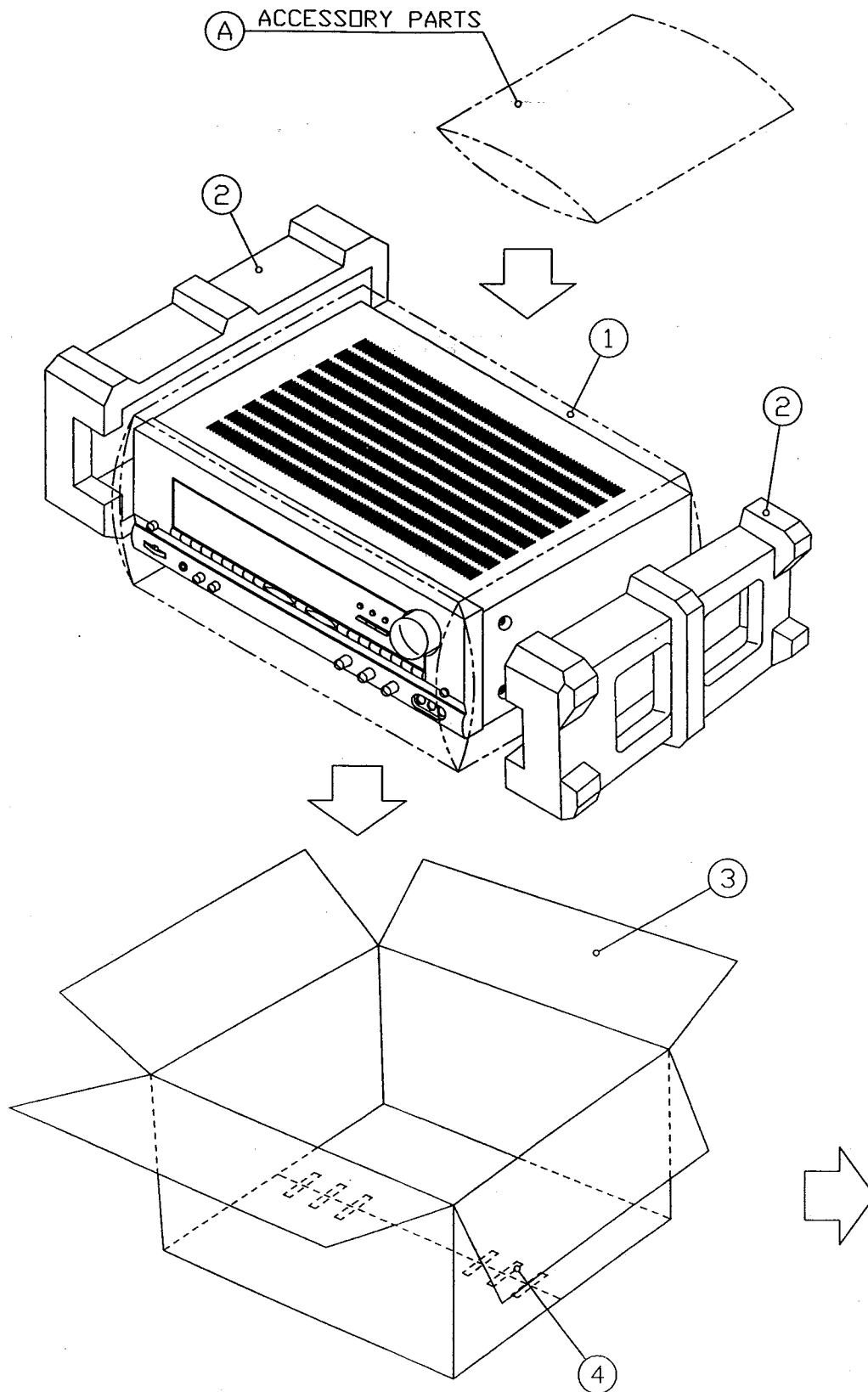
(A) ACCESSORY PARTS

B

C

D

E



A

B

C

D

E

# PACKING MATERIAL

| NO | PARTS NAME     | PART NO        | Q'TY | REMARK |
|----|----------------|----------------|------|--------|
| A  | POLY-BAG-I(G)  | YVAP-01862-ZZ4 | 1    | ***    |
|    | INST-MANUAL    | YIAR-I2001-ZZE | 1    | ***    |
|    | REMOTE CONTROL | ACRC-0056J-000 | 1    | ***    |
|    | WARRANTY CARD  | YWAR-I2001-ZZA | 1    | ***    |
|    | BATTERY        | ***            | 2    | ***    |
|    | FM-ANTENNA     | ANTT-00090-075 | 1    | ***    |
|    | AM-ANTENNA     | ANTL-00060-E50 | 1    | ***    |
| 1  | TOILON-SHEET   | YVAP-13320-ZZ4 | 1    | ***    |
| 2  | CUSHION-L/R    | YSAP-12070-002 | 2    | EPS    |
| 3  | BOX-GIFT       | YGAP-14250-ZZA | 1    | DW3    |
| 4  | AIR-STAPLES    | MMSC-00900-004 | 6    | STEEL  |
| 5  | OPP TAPE       | ***            | *    | ***    |
| 6  | PALLETS        | MWAW-00910-003 | *    | ***    |
| 7  | WRAP           | 7JJG-00212-001 | *    | ***    |
| 8  | LABEL          | ***            | 4    | ***    |

